113,
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/For a comparison of statistical data and general information regarding employment and unemployment in the state of Kerala vs. India as a whole, see 11: India, AW11 Kerala File, category 116, pp. 206-215./

3:Gough E-4, 5 (1947-1949)1961 AWll Kerala AWll
North Kerala Nayar

439 food and other goods. The population expanded and much formerly
[161] waste land was brought under cultivation as gardens for the produc-
[241] tion of coconuts, pepper, cashew nuts, and cinnamon. Higher in the
mountains Europeans developed estates of tea, coffee, and spices,
[464] which attracted wage labor from villages to the west. The develop-
[496] ment of the steamship, the opening of the Suez Canal in 1869, and
the entry of railways into Kerala in the 1860's were significant events
in the process.

564 **Political and Economic Systems**

[566] Traditionally, a hierarchy of the major Hindu castes was present as
in Central Kerala, except that large areas of North Kerala had no
Pulayas or agricultural serfs (*ibid.*, I: 148). Nambudiri Brahmans
were fewer than in Central Kerala, but they controlled a small num-
ber of temple estates and claimed religious superiority over the Nayar
439 rulers. Muslims were the dominant trading population of the ports
563 and inland trading centers.

631 The mountainous terrain, heavy rainfall, poor communications,
sparse population, and comparatively low productivity made politi-
cal centralization more difficult than in Central Kerala. The ancient
Kolattiri kingdom was divided into chiefdoms and villages in a man-
ner similar to the later kingdom of the Zamorin, but judicial con-
trol was perhaps never as well centralized as in the Calicut kingdom.
175 From the fourteenth century, when the Zamorins captured most of
635 the Arab trade, the Kolattiri kingship lost some of its former power.
[634] The kingdom disintegrated into three smaller, virtually independent
kingdoms—Kolattunad, Kottayam, and Kadattunad—plus a number
of small border chiefdoms of uncertain allegiance (*ibid.*, I: 343–344).
174 Each of the three North Kerala kingdoms probably had a population
161 of between 150,000 and 250,000, in contrast to the Calicut kingdom,
635 which seems to have numbered some 600,000 to 720,000 (see note
5, page 473).

175 After 1500 each of the North Kerala rulers sought the help of one
648 or another of the mutually hostile European and Middle Eastern trad-
634 ing powers, thus maintaining a state of fragmentation until the My-
635 sorean conquest. In the struggles of the seventeenth and eighteenth
centuries some new Nayar chiefs also arose with mushroom rapidity
on the basis of European support and gained partially autonomous
sway over small groups of villages. Political and social mobility among
Nayar aristocrats was thus more marked in North Kerala than in the
more stable central kingdoms. Indeed, a North Kerala proverb re-

3:Gough E-4, 5 (1947-1949)1961 AWll Kerala AWll
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matrilocally in a home with the wife's mother and sometimes with others of her older matrilineal kin. Twenty-six couples (49 per cent) lived neolocally in a house provided by the husband and containing no natal kin of either husband or wife. Of these 26 neolocally resident couples, 6 (11 per cent) lived in a house which the husband had inherited from his dead father; 3 (6 per cent of the total) lived in a house which the husband had obtained from his taravād; 14 (26 per cent) lived in a house newly built by the husband for his wife.

These figures may be contrasted with the modern picture in a Central Kerala village, where the marketability of land and labor have also brought about a partial disintegration of matrilineal descent groups and an emergence of the elementary family as a residential and economic unit. Both in Central and in North Kerala, moreover, marriage has been compulsorily monogamous since the 1930's, men have been legally obliged to maintain their wives and children, and the whole of man's private intestate property has passed to his mother, wife, and children at his death (Madras *Marumakkattāyam* Act, 1933; Cochin Nayar Act, 1938; Nair, 1941: 306). In addition, it has now become legally possible for the members of a taravād to divide their matrilineal ancestral property on a per capita basis. Once the ancestral property has been divided into individual shares in this way it becomes private property in law and is heritable in the same manner as are self-acquisitions. Both in Central and North Kerala, therefore, economic change and resultant modern laws have combined to break down traditional matrilineal descent groups.

In Central Kerala, however, population is denser and there has been less waste land available for individual cultivation. Over the past hundred years, therefore, when individual men have acquired private plots, it has more often been through purchase of already cultivated land than through cultivation of virgin land. Further, Nayar men in Central Kerala, having been a professional militia, tended after the disbanding of their armies either to remain non-cultivating owners and tenants or where possible to move into new forms of salaried employment. Central Kerala today is more urbanized than is North Kerala, so that a much greater proportion of Nayars have salaried work in factories, as clerks, as government servants, as schoolteachers, or in the armed services. Many are unemployed and merely live from their ancestral lands. Particularly among retainer Nayars, who are relatively poor, men have amassed less self-acquired land than was possible for Nayar cultivators in North Kerala. Moreover, because Nayar men are often not themselves the cultivators of

3:Gough E-4, 5 (1947-1949)1961 AWII Kerala AWII
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their land, there has been a tendency—under the new law of division of taravād property—for women and immature children to retain the ancestral houses and much of the land and for men to take their individual shares of the property in cash. Thus, having left their taravāds with their shares, some men now find themselves living in a house owned by the wife and her young children. Other men pool their share of property with that of the wife and jointly buy a new garden and house. When the location of their work permits it, most men remain in their ancestral homes until middle age and visit their wives in the traditional manner.

Modern residential patterns in Central Kerala, although moving in the direction of autonomy for the elementary family, thus show a different bias from that seen in North Kerala. Our contrast is made with data from a Cochin village three miles from a large town, where 75 per cent of Nayars of retainer castes worked for wages in the town. Here, out of 65 high-caste Nayar houses, 40 (61 per cent) had been built by kāranavans for their taravāds in the traditional manner; only 22 per cent had been built by a man for his wife and children, and 11 per cent had been built or bought jointly by husband and wife; 3 per cent had been built by a man for his private use, and 3 per cent by a woman for herself and her children.

Taking the constitution of households, we find that 46 per cent contained matrilineage segments more or less of the traditional type, except that one or more husbands of the women might live regularly in the house. Seventeen per cent contained a "broken" matrilineage segment, the adult men of which had left their natal kinswomen, taken a share of the property in cash, and gone to live with their wives. In these houses the husbands of the remaining women might or might not be living with their wives. Twenty-nine per cent of the households were simple elementary families; 3 per cent contained only one man; 3 per cent contained an extended family composed of some modern mixture of matrilineal and patrilateral kin; and one house contained a widow with her small children.

Taking the residence of married couples by household, we find that out of 100 couples, 58 lived duolocally, the husband dividing his time between his natal home and that of his wife in the traditional manner. In some cases the wife might occasionally move for a few weeks to live in the husband's natal home if circumstances made this particularly desirable. Such an arrangement was however very modern in Central Kerala; it was much disliked by women and was seldom resorted to. Eighteen of the couples lived matrilocally; the couple

3:Gough E-4, 5 (1947-1949)1961 AWll Kerala AWll
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591 shared a home with the wife's mother and sometimes with others of
592 her matrilineal elders. Twenty-four lived neolocally in a house con-
178 taining no natal kinsfolk of either partner; of these 24 couples, 7 lived in a private house acquired by the husband; 11 lived in a house jointly acquired by husband and wife; and 6 lived in a house acquired by the wife.

591 As these figures suggest, duolocality is still the accepted norm of
178 residence for younger married couples in Central Kerala, and avun-
culocality slightly less so for those in North Kerala. In both areas
[434] participation in a market economy has caused a shift toward ne-
olocality, especially for middle-aged couples. In the North Kerala village, however, the modern prevalence of cash-crop farming has
[562] carried this tendency further than has small-scale urban wage work in the village in Cochin. At the same time, because of the coöperation of North Kerala men in cultivation, the male sex normally determines the pattern of residence. Couples live avunculocally, neolocally, or
591 even patrilocally because men must live on their land. In the Cochin
562 village, by contrast, the male shift from military to small-scale salaried
● 464 employment has only partially undermined the position of women as
178 the sex which remains on the ancestral land and for which the land is cultivated by lower-caste servants. It is still women whose claims, in the majority of cases, determine the choice of residence in Central Kerala. Women, whenever possible, remain on their own land and men adapt themselves to this condition by living duolocally, matrilocally, or in some cases neolocally in a house partly provided by the wife.

Kinship Relationships

613 MATRILINEAL KIN

576 The etiquette of behavior between matrilineal kin was traditionally the same in North as in Central Kerala, but the emphases in terms of rights and obligations were somewhat different.

The kāranavan's ultimate legal authority was much the same as in the Central kingdoms. However, he lacked domestic authority over women and their small children, who resided elsewhere. Among
[591] adults, avunculocal residence caused great emphasis to be placed on the unity of the matrilineally related men, who should coöperate in work and property management for the good of the taravād as a whole. Covertly, their relationships tended to be rivalrous and hostile. Open disputes between them were often avoided through the separate allocation of plots to individual men. The distance thus created be-

4: Gough E-5 (1947-1949, 1952)1958 AWll Kerala AWll
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obligations to their children and a strong affective bond with them. The *Karanavān* of their lineage segment was however the authority in important matters.

Both in Kottayam and in Cochin, Nāyar women were occasionally married to men of the highest, patrilineal caste of Nambūdiri Brahmans. Children of such unions were Nāyars, and rules of ritual pollution maintained distance between them and their higher caste fathers. The Nambūdiri father might not eat with his wife and children, and might not touch them during the daytime while in a state of ritual purity. Only the eldest son of a Nambūdiri house might marry a Nambūdiri wife and beget children for his own family.

British rule brought about the collapse of the Nāyar armies early in the nineteenth century. Probably as a result of this change, plural marriages gradually died out in Cochin. The lineage system persisted with little change until the turn of the century, but in both areas the employment of men in professional and wage work led to the development of privately owned property in addition to property owned jointly by the matrilineal group. The Malabar Marriage Act of 1896 permitted men to register their marriages and gave the children of such marriages rights in half the personal property of the father after his death. During this century, the greatly increased employment of men in salaried work, and the development of cash-crop farming, have brought about a partial disintegration of the matrilineage, and have tended toward the emergence of the elementary family as an economic and legal unit. Under the pressure of these changes, laws[3] were passed in 1933 and 1937 which required all men to register their marriages, gave rights of maintenance to their wives and children, and provided that the whole of a man's personal property be inherited by his wife and children. In addition, the laws permitted, though they did not require, equal division of the matrilineal estate on a per caput basis[4] between all members. Although some traditional households remain, it has now become fairly customary for a woman and her immature children jointly to separate their shares of property from those of the rest of their matrilineal group, and to set up a new establishment with the woman's husband. He, in turn, may have abstracted his single share of property from that of his own matrilineal group. Sometimes, the husband himself provides a new house for his elementary family from his own share of property and his private earnings. Sometimes the new house is provided from the property of the wife and children, who receive their husband and father into it as a resident and wage earner. Sometimes husband and wife pool their property and set up a joint establishment.

Given the modern heterogeneity of legal, economic, and residential arrangements, and given also variations in education, interests, and life experience, it is not surprising that cults of the dead reveal differential rates of change. I shall be chiefly concerned with the traditional cults, although these persist without change in only a few of the more traditionally patterned households—actually, in fifteen percent of Nāyar households in one Cochin village, and in thirteen percent in one village in Kottayam.

The Nāyars participate in three distinguishable categories of cults of the dead. The first comprises a collective cult, by the matrilineal property group, of the ghosts of matrilineal forebears, which I call lineage ghosts. This cult is non-Sanskritic. The second category comprises various kinds of offerings by individuals to the spirits of dead kinsfolk at funerals or on the anniversaries of deaths. These cults are Sanskritic in origin. The third category comprises various cults of the ghosts of persons who were not members of the Nāyar's own lineage; I call these alien ghosts. These cults,

9:Iyer E-4, 5 (ca. 1902-1906)1912
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464 564 [212] The Nayars are the second in the list of the castes as regards learning, and only five per cent. of the population belong to the learned professions, but they are found in all departments of public service. The community is now availing itself largely of the benefits of modern education, and the members are fast becoming conspicuous in every walk of life. In every department of the State, in all the learned professions, they form a respectable majority, and the only people who successfully compete with them are the Brahman immigrants from the other coast. Though there are extensive landholders and substantial farmers among them, a very large majority of the caste-men are really very poor, being either petty farmers, agricultural labourers or day labourers, earning [357] wages at the rate of four to five annas a day. Even women of the poorer classes do agricultural work. Domestic servants in Hindu families are almost wholly Nayars, but none of them are artisans, weavers or potters.

264 [515] [771] The Nayars seldom eat before their bath or before worshipping in the temple close at hand. Their meals are generally three in number, namely, breakfast which is taken early in the morning, a midday meal between eleven and twelve, and another between seven and eight in the evening, but this meal is generally taken by children between five and six. The breakfast usually consists of *kanji* or rice gruel with some pickles and *pappadam* (round wafers made of the meal of the kidney-bean). Coffee is becoming popular among the Nayars, and this beverage is now often taken for breakfast in well-to-do families. They do not recognize any danger in the use of it, and individuals of all ages indulge in it, so much so that it is even given to young infants. The midday meal, which is usually served between eleven and twelve o'clock, consists of boiled rice together with a few vegetable curries; and butter-milk mixed with rice is the last course.

Food.

262 264 [272] [556]

Their supper which usually consists of similar preparation is taken between seven and eight at night. The women take their food after the male members of the family. Only a minority of Nayars are strict vegetarians, though there is no prohibition against their eating meat, fish or fowl.

[562]

252 556 [357] In large aristocratic families, Brahman cooks are engaged to prepare the meals, but the serving is in some cases done by the members. In other families, on the contrary, the cooks of

9:Iyer E-4, 5 (ca. 1902-1906)1912
AWll Kerala AWll
Nayar

291 is no covering for the head. This forms the costume of a [292] large majority of them. On special occasions or when he goes to public places, he has the same loin cloth, while a richer cloth (*pivu mundu*), somewhat longer and broader, is worn over the upper part of the body. As has already been said, Nayars [464] [177] are to be found in all grades of public service, and these as well as others wear a kind of a neat loin cloth, with a shirt and coat together with a turban to cover the head, while others more fashionable appear in European costume with turbans instead of hats; others again wear hats as well, but their number is few. Among the poorer classes, the loin cloth is not larger than a yard-and-a-half or two by three-fourth of a yard.

302 The men shave their faces and bodies clean, leaving an oval patch of hair on the top of the head, while some grow it over a large surface of the head. In both cases, care is taken to keep the tufts sufficiently long, smooth and oily, and this [177] adds considerably to their neat and handsome appearance; but it is becoming the fashion to crop the hair and to dress it in the fashion of the Europeans.

291 The Nayar women wear an inner garment round the loins and this is covered by an outer garment which is usually two-and-a-half yards in length and one-and-a-half yards in breadth. Sometimes, instead of two cloths, one cloth sufficiently long for the purpose is worn. The dress is white, and sufficiently decent to cover the lower part of the body, and a small upper cloth serves as a covering above the waist. The Nayar women of the present day wear petticoats and cover the upper part of their body [369] with a piece of cloth. It is curious to notice that this form of [178] dress does not find favour (in the rural parts) with the Nambuthiris who are either their landlords or to whom they owe some kind of allegiance or subordination. The absence of any covering for the bosom in ordinary female dress has drawn much ridicule on the Nayars, and this custom has been much mis-[548] understood by foreigners. So far from indicating immodesty, it is looked upon by the people themselves in exactly the opposite light, for among them prostitutes only cover the breasts. "A custom has in it nothing indecent when it is universal," as [71] one of the travellers philosophically remarks (Dall). It is, in [576] fact, a mark of disrespect to one's own elders and betters for either a male or female of the Nayar caste, and of all castes

11: India G-4, 5 (1960-1961) 1962 AW11 Kerala AW11

Preface

THE TECHNO-ECONOMIC Survey of Kerala, conducted at the request of the State Government of Kerala, is one of the last few in the series of Techno-Economic Surveys of the various States of India undertaken by the National Council of Applied Economic Research. For some time past this small State has been attracting increasing attention of the public. Although Kerala has come into limelight on account of its political turmoils, the basic problems which the State faces are primarily economic in nature. The acute intensity of its unemployment aggravated by increased population pressure, the relatively lower per capita income of the people of the State, and highly limited scope for extension of cultivable area, pose a challenging task for the economic planners.

The main objective of the Techno-Economic Survey of Kerala, as in the case of similar surveys for other States, has been to assess technically feasible and economically viable potential for growth in the different sectors of the State economy over the coming decade. The first step towards this objective was to prepare an outline of the present structure of the economy and make an assessment of the existing physical and human resources of the State. A team of economists and technical experts was constituted for this purpose. The preliminary work on the project was started early in 1960. Relevant data were collected and the members of the survey team discussed the problems and potentialities in different fields, with a number of knowledgeable persons in the State. A number of working papers dealing with problems and potentialities in respect of various aspects of the economy were also prepared. Technical Appraisal Reports analysing growth potential in different sectors were then prepared by the technical members of the team.

The Preliminary Economic Report was ready by September 1961 and it was sent to the State Government for comments. The final report as printed here brings together the material contained in the working papers and the Appraisal Reports. The Appraisal Reports contain a detailed technical analysis of each of the major fields of development, e.g., Industry, Power, Transport, etc. The Economic Report, on the other hand, aims at presenting a broad and coordinated picture of the outline of the probable growth of the State Economy. It indicates the main lines along which future development of the State should proceed and highlights the strategy required for achieving a rapid growth of the State economy.

The economy of Kerala is marked by a number of distinctive features. It is the most thickly populated State in India with an average density per square mile being over three times the all-India average. In addition, the rate of growth of population has been noticeably higher in Kerala than in the other parts of India. A high density of population combined with a fast growth of population has been responsible

for the most acute problem of Kerala, viz., abnormally high rate of unemployment. According to a survey carried out by the State Statistics Department open unemployment in the State was as high as 4.2 per cent (all-India 0.6%) and under-employment 9.6 per cent of the total population (all-India 6.0%).

The unemployment problem of Kerala might not have been so severe had there been a correspondingly rapid development of industries over the past few decades. In this sphere the State suffers from certain handicaps. Although the industrial sector in Kerala absorbs a high proportion of the working force (Kerala 19.1%; India 9.4%), the majority of them are engaged in very low productivity industries. The two major industries of Kerala, viz., coir and cashewnut are technologically very backward. Coir industry, which is organized as a cottage industry, absorbs 4-5 lakh persons. Cashewnut-processing, although organized on the lines of factory industry, is almost entirely unmechanized. As a result, labour productivity in the secondary sector is extremely low. Because of this, industrial sector in Kerala does not create any sizeable reinvestible surplus and the process of capital formation is hampered. The types of industries in which Kerala predominates, have not also aided the development of entrepreneurial talents. Kerala lacks in a long tradition of industrial enterprise. Most of the large scale industries which now exist in Kerala, for example, Fertilizers & Chemicals Travancore Ltd., Travancore-Cochin Chemicals Ltd., Indian Aluminium Company and Aluminium Industries Ltd., were started under the direct initiative of the governments of the erstwhile States of Travancore and Cochin or industrialists from other neighbouring States of India. No distinct body of local entrepreneurship has, therefore, developed in the State.

In addition, lack of sizable mineral deposits (except Ilmenite) adds to the difficulties which have been retarding industrial development of the State. Coal as well as all metallic raw materials for the industries of Kerala have to be transported over long distances from other parts of the country. But there are favourable factors compensating some of these deficiencies in the economic endowments of the State. The agricultural sector of Kerala abounds in a rich variety of high value yielding cash crops like coconut, pepper, rubber, arecanut, tea, cashewnut, cardamom and coffee. These crops not only provide considerable incomes for the farmers, but are a good source of foreign exchange earnings and provide valuable raw materials for the industries. A vast potential for generation of low-cost hydro-electric power makes up for the absence of fossil fuels. Rich forest and fishery resources, a highly intelligent and literate labour force, easy accessibility to most parts of the State through a wide network of roadways, and the scenic beauty of its landscape capable of attracting tourists, are some of the other assets of Kerala.

As a result of the present survey, several lines of technically and economically feasible developments have been suggested in this report in the industrial and other fields. The total impact of these developments would be to raise the per capita income of the State from the present level of Rs. 240 (at 1955-56 prices) to Rs. 404 (at the same price level) by 1970-71. State income would rise from Rs. 400 crores (at 1955-56 prices) to Rs. 812.8 crores, i.e., at an average annual rate of 10.3 per cent. The targets are undoubtedly on the high side, but the needs of Kerala in the context of its huge unemployment and very low per capita income demand a rather high

rate of growth if economic and social stability is to be attained within a reasonable period. 433* 434

Growth of this magnitude can be achieved in a balanced manner over the decade through an increase of about 60 per cent in the income from primary sector, 175 per cent from the industrial sector, and 103 per cent from the tertiary sector. Sectoral growth rates of this magnitude would bring about structural changes in the economy. Over the decade the proportion of income contributed by agriculture and other primary activities would decline from 48.2 per cent to 42.8 per cent while that from secondary sector would increase from 15.7 per cent to 21.2 per cent. Income from the tertiary sector would remain more or less constant around 36 per cent. Similarly the inter-sectoral distribution of working force would undergo changes. By 433* 1971 the proportion of employment in the primary sector would decline from 54.9 464 per cent in 1956 to 42.2 per cent while in the secondary and tertiary sectors it would increase from 19.3 per cent to 24.6 per cent and 25.8 per cent to 33.2 per cent, respectively.

In planning the strategy of growth for Kerala two important factors need to be stressed: (*a*) a proper system of crop priorities in the sphere of agricultural development and (*b*) technological improvements in the industrial sector. 433*

In the sphere of agriculture, the trend of thinking up till now has been to emphasize the need for achieving self-sufficiency in foodgrains within the State. This has led to a sizable increase in the area under foodgrains at the expense of high value adding cash crops, despite the fact that Kerala offers highly favourable conditions for cash crop cultivation. The right policy for the State Government to adopt would be (*a*) to meet its foodgrains deficit by import from surplus States and (*b*) to reserve to the maximum extent all new lands coming under cultivation, for cash crops.

For raising the yield of foodgrains, a programme of widespread use of improved seeds, intensive use of fertilizers, control of soil erosion and provision of major and minor irrigation have been suggested. It is estimated that over the decade the various measures contained in the report would raise the output of foodgrains by 7.28 lakh tons. By 1970-71, the output of foodgrains would be about 16.5 lakh tons leaving a big gap to be filled by imports from other surplus States.

This report does not agree with the view sometimes propounded that the need for providing irrigation facilities is less in this State because rainfall is high. Irrigation is essential for double or triple cropping, stabilization of crops and for effective application of fertilizers. Moreover, in view of the terrain of Kerala, it is also necessary to develop irrigation facilities through minor irrigation schemes. Irrigation projects suggested in the report therefore require an investment of Rs. 39 crores in major works and Rs. 20 crores in minor works.

The need for a faster pace of industrialization than achieved hitherto is particularly urgent in Kerala in view of the high man-land ratio already attained in this State. There is a limit beyond which employment in the agricultural sector cannot be increased. A solution to the key problem of Kerala, viz., high degree of unemployment, can therefore be attempted only by further industrialization of the State. Industrial development will also be the main spearhead of overall growth of the State economy.

11: India G-4, 5 (1960-1961) 1962 AWll Kerala AWll

433 In the sphere of industries, the major emphasis has been placed on the expansion of engineering industries. Out of a total investment of Rs. 145 crores in the factory industries, the engineering industries alone will absorb nearly Rs. 63 crores. The majority of light engineering industries to be established or expanded are high value adding industries and would cater to regional demand for implements, tools and other engineering goods. The capital-output ratio for these industries is also comparatively low, viz., 2.1. These are some of the factors on account of which a large scale expansion of engineering industries would be quite feasible in Kerala although the raw materials required by them would have to be imported from other parts of India over long distances. A large scale expansion of engineering industries would help to improve the technological level of other industries and agriculture in Kerala. Apart from being themselves technologically superior, the engineering industries induce technological improvements in other spheres and spread the use of better equipment, tools and machines.

For a steady growth of industries in a State like Kerala where the industrialists have been shy of investing on account of its unstable political climate, it is most essential to take all possible measures to inculcate a sense of confidence among the investor class. The State Government's recent Industrial Policy Declaration expressing their desire to give all possible help to prospective entrepreneurs, marks a step in the right direction. However, the State Government alone may not be able to go far in this matter unless they have the active cooperation of the public and political parties in the execution of their economic policies.

371 One of the chief assets of Kerala from the point of view of its future industrialization programmes is its vast resources of hydro-electric power. During the Second Plan period unfortunately, signs of power shortage were visible and the growth of industries had to suffer as a consequence. For the coming years the State should keep ahead of demand for power and should plan for surplus power generation capacity. Secondly, since the State has plenty of power resources and the costs of generation are very low, it would be in the interest of the economy of the Southern region of India to form a zonal grid. The surplus power generated in Kerala could be sold at a profit to the neighbouring States, especially Madras, which is not so fortunately placed as Kerala in respect of its hydel resources. Kerala would also stand to gain from this transfer of electrical energy since it can generate power at a much lower cost than its neighbouring States, and therefore, earn sizeable revenues from this source.

Total investment effort required for execution of the plans of development suggested in this report would be of the order of Rs. 1,000 crores over the ten-year period. The share of the State Government would be approximately Rs. 500 crores, the balance being left to the initiative of the Private Sector, and the investments through Central Government projects. Total investment would be distributed over the primary, secondary and tertiary sectors in the ratio of 20.8 per cent, 28.8 per cent and 50.4 per cent respectively.

371 464 The impact of the proposed developments on the unemployment situation is not likely to be unimpressive. It is estimated that of the 17.8 lakh jobs envisaged to be created over the decade, 1.8 to 2 lakh jobs would be in the primary sector, 7.8 lakhs in the industrial sector and the balance of 7.7 lakhs in the tertiary sector. It

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would still leave a backlog of about 4.7 lakhs unemployed persons in 1970-71. However, the proportion of unemployed persons to the total population would have been reduced from 4.2 per cent to 2.3 per cent.

It may thus be seen that in spite of certain optimistic assumption regarding creation of employment opportunities and a reduction in the intensity of unemployment, the number of unemployed persons by 1970-71 would be large for a State like Kerala. In the long run an effective solution to the over-population of Kerala can only be provided by a reduction in the rate of population growth through intensification of Family Planning Programmes and migration to other parts of India. The need for widespread use of family planning methods and measures to promote migration, is all the more urgent in a region like Kerala where population density is high, rate of growth of population is rapid, and an acute unemployment problem exists. More reliance on measures to create additional employment opportunities within the State is not enough.

This survey like other similar surveys was undertaken by a team of National Council economists and technicians headed initially by Dr. B. Natarajan and later by myself with the assistance specially of Mr. A.K. Mathur and Mr. S.R. Bose both of whom spent considerable time in the State. At the specific request of the Government of Kerala, the Director-General directed the enquiry in all its stages and visited the State on a number of occasions and guided the team. The names of persons who participated in the survey are listed in appendix 1. To all of them, specially to Mr. Mathur on whom the task of drafting the preliminary report fell, I wish to express my thanks. I would also like to acknowledge the help and cooperation received from the Government and the officers of the Kerala Government, specially the Director of Industries in the various stages of the survey. Finally, to the Minister for Industry, Mr. K.A. Damodara Menon I am specially indebted for his continuous interest in the survey and for the support and encouragement he gave to our staff.

P.S. LOKANATHAN
Director General

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1.9 The distance within which these rivers descend to the sea level being very short, there are generally a large number of steep falls or a series of cascades in their courses. These provide a rich potential for generation of hydro-electric power, which can be generated at a low cost (1.7 nP per kWh on an average). This low cost power potential is an important asset of Kerala from the point of view of the future programmes of industrialization.

1.10 Some other implications of topographical features are not so obvious. For example, the lakes, the lagoons and the backwaters fringed with coconut palms, no doubt, impart to Kerala its characteristic scenic beauty and provide one of the chief tourist attractions. Their importance, however, goes much beyond the purely aesthetic aspect. In fact, the backwaters—especially in the Travancore-Cochin region—are indirectly responsible for providing the means of livelihood to a vast section of the population. Coir spinning, the chief industry of Kerala, is located in this State primarily because of the natural retting facilities provided by the backwaters. The availability of these facilities is unique in the case of Kerala. In almost all other coconut-growing areas of India, the coconut husks go waste because of the absence of natural retting facilities. Since coir industry provides an occupation to 4 to 5 lakh persons (about 10% of the total working force and 40% of industrial working force), one can well imagine what the unemployment situation in Kerala would have been in the absence of the backwater facilities. The backwaters have also facilitated the development of a wide network of inland waterways all along the coastline. Apart from employing a large number of persons in towing or rowing the boats, the inland waterways provide inexpensive modes of transporting the agricultural produce and light industrial goods manufactured in the coastal area.

1.11 Up till now only some of the favourable consequences of physical features have been pointed out. The sloping terrain and preponderance of backwaters in the coastal area also possess a negative aspect. The heavy downpour is gradually leaching off the mineral content of the soils, thus rendering them generally poor in their fertility status. One of its ultimate consequences is the fact that livestock feed available in Kerala is deficient in mineral content and this in turn reduces the yield of milk of the livestock. The heavy precipitation of rain also creates a serious flood control problem in Kerala.

1.12 The backwaters raise other problems as well. During the dry summer months saline water from these flows into the lower reaches of the rivers, many of which fall into the backwaters. This has an adverse effect on cultivation and the supply of drinking water in the coastal areas. Coastal areas are, therefore, beset with the problem of salinity control. The chain of consequences does not stop here. Recently implementation of one of the important salinity control measures in Kerala, viz., the Thanneermukkom bund across the Vembanad lake has created a new problem in its wake. The accretion of limeshell deposits, an important raw material found in the lake, depends on the high salinity of the lake water. Since, after putting up of the barrage salinity of water will get reduced, it will have adverse repercussions on the long run supply position of the limeshells. This, in turn, jeopardizes the long run prospects of the cement industry in the State which is based on the limeshells.

[Text continues on p. 6]

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182 1.13 These, broadly, are the inter-relationship between physical features and economic aspects of the State, and largely determine the nature and structure of the Kerala economy discussed below.

Density of Population

161 [469] 1.14 In the ultimate analysis, the basic problem of Kerala, viz., an inordinately large section of the population being without any gainful work, is brought about by the very high density of population in the State. With an area only 1.2 per cent of the whole of India, Kerala has to support 3.8 per cent (16.8 million) of the total population of India. The density of population in Kerala (1,125 persons per sq. mile) is naturally over three times the all-India average (384 persons per sq. mile).

1.15 The population, however, is not evenly spread out over the whole of the State, but shows considerable variations from district to district (Table 2).* The highland, being mostly covered with forests, is sparsely populated. The average density here is only about 150 persons per square mile. On the other hand, the lowlands bear the severest burden of population. With only about 18 per cent of the State area, they support over 40 per cent of the population. On the other extreme is the coastal strip where the average density is over 2,500 persons per square mile. In certain pockets it even shoots up to 7,000 persons per square mile. The midland, though thickly populated, is not as congested as the area lying in the immediate vicinity of the sea coast.

Growth of Population

1.16 Not only is the density of population high in Kerala, but its rate of growth has also been fairly high. The following table gives the rate of growth of population over the last half century both for India as well as for Kerala.

DECENNIAL PERCENTAGE VARIATION IN POPULATION

Year	India	Kerala
1901-11	5.69	1.75
1911-21	−0.31	9.16
1921-31	11.00	21.85
1931-41	14.23	16.04
1941-51	13.34	22.82
1951-61	21.49	24.55

Source: 1961 Census of Population Provisional Figures.

[165] [163] 1.17 As can be seen, the population has grown much faster in Kerala than in the country as a whole during the last six decades. The basic reason for a faster rate of growth of population in Kerala is a comparatively low death rate while the birth rate is only slightly less than the all-India one. The comparative position of birth and death rates in India and Kerala is given in the following table.

* [see p. 270, category 11b -- Analyst]

[text continues on p. 8]

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1.2 per cent of the total area of India, this contribution is quite significant. Yet the per capita income of Kerala in 1955-56 (Rs. 234.4) was lower than the all-India average (Rs. 261) by about Rs. 27, that is, 10.3 per cent.

1.22 The distribution of output and employment between primary, secondary and tertiary activities gives a broad indication of the stage of development an economy has attained. As a general rule, the more advanced the stage of economic development, the higher the proportion of income and employment originating in the secondary and tertiary activities. In Kerala the sectoral distribution of output and employment presents somewhat of a contrasting picture (Tables 3 and 4).[2] In terms of employment, the proportion of working force engaged in agriculture and allied occupations (55%) is much smaller than the corresponding all-India proportion (71.8%). This would seem to indicate that Kerala has perhaps reached a level of development somewhat comparable to that of a country like Japan. But the picture presented is quite different when one looks at the proportion of income contributed by the various sectors. The major share (49.1%) of output still originates in the primary sector (all-India: 45.4%). The secondary and tertiary sectors taken together contribute 50.9 per cent of the output against 54.6 per cent in the case of all-India.

1.23 Thus, while the sectoral distribution of population seems indicative of a diversified structure of the economy, the sectoral distribution of income does not. Two factors seem to provide a plausible explanation for this contrast. In view of the high density of population, the possibilities of providing gainful employment in the agricultural sector are naturally limited. Super-imposed upon this is the fact that as a result of the predominence of perennial crops, especially the coconuts, in the agricultural sector, the cropping pattern in Kerala is comparatively less labour-intensive. As a result of the operation of these forces, a large section of the population appears to have been forced to turn to some sort of non-agricultural activity or the other. But this seems to be of a "make-work" character. The technology of the secondary sector is traditional and its productivity is appallingly low.

1.24 In fact, productivity in Kerala's secondary sector is even lower than in the primary sector. This reversed position of Kerala only points to one of the strange paradoxes that occur in an under-developed economy. Ultimately, it is not so much the sectoral distribution of working force as the sectoral levels of productivity that are the determinants of growth. Productivity, in turn, is a function of the level of technology. Table 4 shows that the net output per worker in the secondary and tertiary sectors is lower than the average for all-India. As may be observed, low productivity is especially marked in the secondary sector which mostly covers the industries (Kerala—Rs. 539 ; all-India—Rs. 1,294).

Agriculture and Plantations

1.25 On the other hand, the primary sector in Kerala is comparatively better developed. This is a distinct feature of the State economy. Primary sector comprises agriculture, plantations, animal husbandry, forestry and fisheries. As may be seen from Table 4, labour productivity in the primary sector of Kerala is roughly

[2] [see pp. 270-271, category 116 -- Analyst]

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against the all-India average of 7.5 acres; and over 60 per cent of the landholdings in Travancore-Cochin area are less than one acre in size.

1.31 The high pressure of population also reveals itself in an urge to push along the margin of cultivable area as far as possible. This is shown by the fact that the proportion of net sown area (45.25 lakh acres) to total area of the State was as high as 47.16 per cent against 39 per cent for the whole of India in 1956. The higher proportion assumes even a greater significance in view of the fact that forests cover over 25 per cent of the total area of Kerala (all-India—18%).

1.32 The agricultural labourers form a very high proportion of the agricultural population (Kerala 39%: India 17.5%), and the extent of under-employment among them is also one of the highest in India. The number of days of employment per agricultural labourer in Kerala was only 170 days per year[1], the lowest in the whole of India.

1.33 A deterioration in the position of the agricultural labourers is shown by the decline in the average annual income of agricultural labour households between 1951 and 1957. As can be seen from the table below, the average annual income of an agricultural labourer's household in Kerala declined from Rs. 486 in 1951 to Rs. 437 in 1956. This is a much steeper decline than observed in the case of the whole of India, presumably due to a higher rate of growth of population in Kerala than in India.

AVERAGE ANNUAL INCOME OF AGRICULTURAL LABOUR HOUSEHOLDS

	Kerala (Rs.)	*India* (Rs.)
1950-51	486	447
1956-57	437	437

SOURCE: *Second Report of the Agricultural Labour Enquiry Committee.*

Consumption Pattern

1.34 The level of consumption expenditure per head is a good indicator of the standard of living prevailing in any region. Table 5[2] gives a comparative picture of the pattern of consumption expenditure for the rural areas of Travancore-Cochin[3] and India. As may be seen, the average monthly consumption expenditure in Kerala (Rs. 18.64) is lower than that in all-India (Rs. 21.44), indicating a somewhat lower standard of living in the State.

1.35 The break-up of total expenditure into different items of consumption reveals some interesting points. The expenditure on foodgrains, milk and milk products is not only absolutely lower in Kerala but even as a proportion of total expenditure, it is considerably below the all-India average. On the other hand, meat, egg, fish and 'other food' absorb quite a high proportion of consumption expenditure in Kerala. These differences reflect the relative scarcity of foodgrains

[1] *Report of the Agricultural Labour Enquiry Committee.*

[3] The data is compared for Travancore-Cochin and India (1952) because figures for Kerala State are not available. However, the conclusions are likely to be broadly true of Kerala also.

2 [See p. 272, category 116 -- Analysis]

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India coastline, 30 per cent of the country's fish production came from the coast of Kerala. There is, however, still ample scope for increasing the output of fish. Only the fringe of the potential for off-shore fishing has been tapped up till now. Similarly, it is believed that the output of fish can also be increased considerably from the coastal fisheries without subjecting the fishing grounds to undue pressure. Introduction of mechanized fishing and better fishing gear can add considerably to fish production. However, as it is, the fishermen are the most depressed class of persons in the economy, and unemployment is at its maximum among them.

1.42 Development of fisheries is of particular importance in case of Kerala in view of the large food deficit of the State. The requirements of rice for a balanced diet could be considerably reduced if it is adequately supplemented by tapioca and fish. Tapioca by itself is not an adequate substitute for rice requirements since it lacks in proteins. However, its food value can be considerably enhanced if it is combined with a sufficient quantity of fish.

Secondary Sector

1.43 The secondary sector covers mining and industry. Mining activity is comparatively limited in Kerala in view of the meagre occurrence of minerals. During 1955-56 mining contributed only 0.6 per cent of the State Income (all-India 1%). The chief mineral asset of Kerala is the beach sand. Ilmenite is the most important variety of the beach sands. Besides some fine quality china-clay, of which there are good reserves, other items of mineral wealth of Kerala are not of any particular importance.

1.44 The industries of Kerala, both the factory[1] and the non-factory type, are marked by a low level of productivity as shown by Table 4. The main reason for this is the backwardness of technology employed as would be true of other parts of India as well. While this may not apply to the modern industries run on a large scale basis, in some of which indeed the State has been a pioneer, the overall picture of industry presented as a whole is, nevertheless, one of poor technological level. Further, during 1955-56, the organized factory industries employed 17.5 per cent of the working force in the secondary sector (9.7 lakhs) as against 21.8 per cent in India. Moreover, in both the factory and the non-factory categories, the major share of employment opportunities is monopolized by a few industries which can by no means claim to be in the forefront of modern industries.

1.45 In the non-factory sector, out of a total working force of 7.8 lakh persons, almost 50 per cent of the workers are employed in the coir industry, the foremost industry of Kerala. As in most cottage industries, the maximum degree of mechanization in coir industry never goes beyond a spinning wheel. In Malabar, even that is missing, since spinning operations are mostly carried on with hand. Similarly in the factory sector, the three major industries, viz., cashewnut, textile and coir factories which account for 64 per cent of factory employment, are entirely unmechanized.

1 Factory type of units are defined as those falling within the coverage of Section 2 in (i) and (ii) of the Factories Act, 1948. These include all those factories employing more than 20 workers as well as those employing between 10 to 20 workers, if using power.

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Cashewnut industry, by the very nature of the process involved, does not require much of capital equipment. Although the average size of cashewnut factories is about 400 workers per unit, capital requirements in the industry hardly exceed Rs. 200 per worker. Even the coir and cotton textile factories in Kerala use only the handlooms. Existence of handlooms within the precincts of textile factories is, in fact, a unique phenomenon in Kerala (especially the Malabar region). Only a dozen out of over 300 textile factories use modern equipment. Nowhere else in India can this be seen.

1.46 The contrast between a well-developed primary sector and a backward industrial sector is also brought out by comparative wage statistics for the two sectors. It has already been pointed out that in spite of a high degree of unemployment in the agricultural sector, the wage rates and average household earnings, though low, do not compare very unfavourably with the average for all-India. On the other hand, the average annual earnings of workers in factories covered by the Payment of Wages Act are only Rs. 736 per worker. As may be seen from the table below, this figure is one of the lowest in the whole of India.

AVERAGE ANNUAL EARNINGS OF FACTORY EMPLOYEES, 1956

	Rs.
Andhra	593
Assam	1,326
Bihar	1,236
Bombay	1,415
Madhya Pradesh	982
Madras	950
Orissa	947
Punjab	991
Uttar Pradesh	1,014
West Bengal	1,142
KERALA	736

SOURCE: *Statistical Abstract of India* (1957-58).

Overhead Facilities

1.47 In respect of overhead facilities, Kerala is fortunately better placed than many other parts of India. This has been the result of a progressive policy followed by the Governments of the erstwhile States of Travancore and Cochin, whose rulers took an active interest in the development of various public amenities and tried to attract industrialists from other parts of India to invest in Kerala.

1.48 In the sphere of transport, the coverage of Railways is rather limited, total route mileaghe being only 543 miles. This is, however, more than compensated by the wide network of roadways, which in spite of its many drawbacks, is superior to that in most other parts of India. The extent of road mileage per 100 square miles as well as the vehicle density in Kerala are the highest in the country. Road transport is, in general, more suited to conditions prevailing in Kerala than Railways because of the uneven nature of the terrain.

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Imports and Exports

1.53 Reference has already been made to the fact that Kerala is very much of an exchange economy. On the one hand it has to import a substantial part of its foodgrain requirements from the other parts of India. No exact estimates of total import of foodgrains into the State are available. The total amount of rice arriving in Kerala by train was 3.8 lakh tons during 1958 and 4.8 lakh tons during 1959.[1] This does not, however, include imports by roads or by the sea. In addition to foodgrains, almost all the industrial raw materials like coal, alumina, iron and steel, salt, etc., are obtained from the other parts of India.

1.54 On the other hand, Kerala also contributes substantially to India's export trade. As may be seen from Table 6, the total value of goods exported from the ports of Kerala to the other parts of the world is roughly Rs. 55 crores per annum, but the figure has been rising over the last few years. This is quite a substantial amount, being about 10 per cent of the overall foreign exchange earnings of India. Since this State occupies only 1.2 per cent of the total area of India, in relation to its area it may be claimed to be eight to nine times more productive in terms of its foreign exchange earnings than the whole of India.

1.55 The main export commodities of Kerala are listed in Table 6. It will be seen that the three major items which contribute about 75 per cent of total foreign exchange earnings of Kerala are tea, cashewnuts and coir and coir products. Except for fish, prawns and ilmenite, all other exportable commodities originate in the agricultural sector.

1.56 Whereas exports of most of the commodities have been rising, the trend in the case of coir, pepper and ginger has not been a promising one. Of these three commodities, pepper shows the most serious decline in foreign exchange earnings. In physical quantity the export of pepper has not declined much. It was 3,3 lakh cwts. in 1951-52 and 3.2 lakh cwts. in 1958-59. The decline in foreign exchange earnings from the export of pepper has been due to a drastic fall in the world price of pepper. The crash in prices has, in turn, been primarily due to a large increase in the production of pepper in other competing countries like Indonesia, Sarawak and Malaya. Similarly, in case of ginger and coir products no preceptible rise in exports has taken place due to competitive pressure in the foreign markets.

Unemployment

1.57 According to the Census of 1951, Kerala had a working force[2] of 4.54 million persons out of a total population of 15 million, giving a participation ratio (i.e., working force divided by total population) of 33.5 per cent. Since a participation rate of the order of 33.5 per cent is one of the lowest in the whole of India, it gives a fair indication of the very high degree of unemployment prevalent in Kerala. A low participation rate reflects the lack of adequate opportunities for gainful employment. These conclusions are borne out by the results of an unemployment

[1] *Economic Review of Kerala*, 1959: Government of Kerala.

[2] Working Force is equal to the sum of earning dependents and self-supporting persons. For a detailed note see Appendix 3.

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survey carried out in Kerala on the eve of the Second Plan period. According to this survey, 6.3 lakh persons, that is, 4.2 per cent of the total population were openly unemployed while another 15.2 lakhs (5.2% of the population) were under-employed. This is, indeed, a very high degree of unemployment when compared with the corresponding all-India proportion of 0.58 per cent for the openly unemployed and 6 per cent for the under-employed.

1.58 There is some evidence to show that the level of unemployment has been rising steeply over the past few decades. Between the Census of 1931 and that of 1951 the participation rate slumped down from 48 per cent to 36.1 per cent. Although the difference in concepts used in the two Census operations exaggerates the extent of decline, it does convey some idea of the fast deterioration in the unemployment situation over the years.

1.59 Unemployment on this scale is the outcome of a high rate of population growth, unaccompanied by economic growth at a correspondingly fast rate. In spite of a large section of the population being engaged in non-agricultural activities, the rate of expansion of employment opportunities in this sector has been very low, and the pressure on agricultural sector has been constantly increasing. In the 20 years, between 1931 and 1951, according to the Census data, the proportion of population dependent upon agriculture increased from 34.2 per cent to 53.8 per cent.

1.60 The approach to the problem of unemployment has got to be two-sided. Measures to curb the rate of growth of population form one aspect of the solution. The second and the more important weapon is to accelerate the pace of industrial development so as to diversify the pattern of growth and, thus, reduce an excessive dependence on the agricultural sector. It is with this aim in view that the following chapters attempt to assess the resources available and to explore the development possibilities in each sector of the economy during the coming decade.

SOME RECENT TRENDS

1.61 Planned economic development, as in the rest of the country, was initiated in the State during the early years of the last decade. The First Plan of the State covered only the Travancore-Cochin region since Malabar was merged to from Kerala only after the end of the First Plan. The outlay for the First Plan was Rs. 30.03 crores. On a per capita basis the public sector outlay during the First Plan came to Rs. 32.2 per head (all-India Rs. 55). During the Second Plan, the reorganized State was allotted Rs. 87 crores. The total outlay came to about Rs. 97 crores if Central investment in the State be also included. On per capita basis, again, public sector outlay in Kerala was considerably behind the all-India figure (Kerala: Rs. 64 per head ; all-India: Rs. 118).

1.62 Year to year estimates of growth of the State Income are not available for the last decade. This lacuna makes it difficult to assess the overall impact of the Plans on the whole economy. However, a very rough estimate has been made for growth of the State Income between 1956 and 1961 and the estimates are given in the following table.

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Chapter 2

Agriculture and Plantation Crops

DISTINCTIVE FEATURES OF AGRICULTURAL SECTOR

A NUMBER OF distinctive features are characteristic of the agricultural sector of Kerala. In the first place, Kerala surpasses all other regions of India in respect of the high pressure of population on land. Secondly, on account of the large number of valuable cash crops, the agricultural sector is more commercialized in the State than elsewhere. Thirdly, food production has always been far short of Kerala's requirements.

2.2 With the fast rising density of population, the margin of cultivation has been constantly receding. The proportion of net sown area to total geographical area is consequently much higher in Kerala (47.16%) than in the rest of India (all-India: 39.1%). The average size of land-holdings, however, is much smaller (1.5 acres) in Kerala (all-India: 7.5 acres). In the Travancore-Cochin area, 66 per cent of the holdings are below one acre in size. (Table 7)[2]

2.3 The scarcity of land in relation to population has been responsible for an acute state of unemployment and under-employment among the people in the rural areas. Unemployment is about three to four times higher in Kerala than in the rest of India. The acute state of unemployment is also accounted for by Kerala's cropping pattern which is comparatively less labour absorbing than in many other parts of India. The perennial crops which take up 47 per cent of the cultivated area need labour recurrently only for maintenance and harvesting[1] although crops like tea and rubber require human labour on a large scale for picking of the green leaves and tapping of rubber. The perennial crops require very little labour for basic operations such as preparation of seed bed, sowing, etc., except once in their life time.

2.4 However, the fact that the cropping pattern of Kerala is not labour-intensive is compensated to some extent by the higher value yield of the perennial crops per cultivated acre. The soil structure and climatic conditions in Kerala favour a high value yielding cropping pattern. On an average, cash crops contribute Rs. 100 crores (65%) to the income from agriculture (Rs. 151 crores). Of the cash crops, coconuts occupy 20.2 per cent of gross cropped area, standing next only to paddy which occupies 35.8 per cent of the gross cropped area. But the value yielded per acre for coconuts (Rs. 446) is more than twice that for paddy (Rs. 212). The position regarding the other crops is given in Table 9.[3]

2.5 In respect of plantation crops the only other State which approaches closest to Kerala is Assam where the proportion of cultivable area devoted to plantation

[1] This aspect is discussed in greater detail in the Chapter on Manpower No. 11.

[2] [see p. 273, cat. 116 -- Analyst]

[3] [see p. 275, cat. 116 -- Analyst]

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its success to the persevering efforts of the State Agriculture Department. The department has made a successful drive for pulse cultivation with a view to (*i*) raise the production of pulses in which the State is grossly deficit, (*ii*) to increase crop intensity, and (*iii*) to enrich soils by including a legume in the rotation.

2.16 During the same period the area under oilseeds rose by about 131 per cent. The area under all the millets, except ragi which rose by about 9 per cent, has registered a decline ; jowar area has declined by 33 per cent, and small millets by 53 per cent. Perhaps the increase in the area under some of the higher value crops such as oilseeds and sugarcane was at the expense of inferior and low value millet crops. This is another indication of the growing preference for high value crops. (Table 10)[1]

2.17 Land productivity is generally high in Kerala and compares very favourably with that in the other States of India. Yield of rice, the principal crop, was 1,108 lbs. per acre in 1958-59, which is about 20 per cent higher than the all-India average. Only the States of Madras and Andhra have higher yields. During 1951–59 the rice yield has increased by about 25 per cent (Table 11)[2] as a result of increased application of fertilizers, improved seeds and better agricultural practices. Similarly ragi is another high yielding crop with a yield of 1,290 lbs. per acre (1958-59)—the highest in India.

2.18 On the whole the yield rates for most of the crops have improved between the years 1951–59. For cotton and ragi, as in the case of paddy, the increase has been quite significant. On the other hand, there was a decline in the yield rate of jowar, groundnut and sugarcane. (Table 11)[2]

2.19 The latest districtwise disposition of area and production show that Palghat has the largest concentration of important food crops grown in the State. In 1958-59 it accounted for 29.2 per cent of the area under rice and one-third of rice production in the State. Palghat also leads in the production of millets and pulses. The district of Kottayam leads in plantation crops as well as in some of the other cash crops, for example, it had 32 per cent of area under ginger, 29 per cent of area under turmeric and 16.9 per cent of area under sugarcane.

2.20 There is a considerable degree of regional specialization in some of the minor field crops. For example, Palghat accounts for over 90 per cent of the area for the production of cotton and groundnut in Kerala. Similarly sesamum is concentrated in Alleppey (61%), tur (56%) and smaller millets (69%) in Palghat, and chillies (51%) and tobacco (95%) in Cannanore. This specialization is due to favourable conditions for the cultivation of these crops in the areas where they are being grown.

Future Development

2.21 It is generally known that agriculture aids economic development in three different ways. By providing a surplus of food requirements, it sustains a growing urban population. Secondly, agriculture is an important source of industrial raw materials and, in under-developed regions, generally forms the base for a large number of industries. This is particularly so in Kerala where over 70 per cent of the factory workers are employed in agro-based industries. Lastly, higher agricultural yields

[1] [see p. 276, category 116 -- Analyst]
[2] [see p. 277, category 116 -- Analyst]

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134 units. Actual cost is borne by the beneficiaries because the State recovers it by easy
185 instalments. The average cost of soil conservation is Rs. 150 per acre. The total cost of conserving one million acres at an average rate of Rs. 150 per acre would be Rs. 1.5 crores per year assuming that the programme is evenly phased. Soil conservation work is also very labour intensive and the proposed programme would give continuous employment to about 17,500 persons over the next 10-year period.

[464]

Related Aspects

*433 2.79 For full effectiveness, the development programme for agriculture, as
649 suggested above, would need a larger extension organization than that which was set up in 1953. It is expected to cover the whole of the State by the middle of the Third Plan period. The extension work at present is not intensive enough. The number of extension workers is too few to be really effective; the staff capacity needs to be augmented. In this connection the Agriculture Personnel Committee has recommended that the work in charge of a village level worker should be reduced by half. The Committee has also made suggestions on other aspects such as training and education, etc., of extension workers. The State Government may examine these proposals with a view to implementation as early as possible.

Marketing

*433 2.80 The small cultivators generally experience great difficulty in disposing of
442 their produce at reasonable prices. In case of some commodities like ginger, pepper
438 and arecanut, the difference between the price received by producers and that paid by consumers is as high as 100 per cent. In addition, none of the commodities except lemon grass is properly graded and this leads to serious consequences from the point of view of export markets. Marketing, processing and grading facilities should be developed so that both the producers as well as the consumers are benefited. In this context, as recommended by the Directorate of Marketing and Inspection, all the 41 wholesale markets in the State should be regulated. At present only four are regulated.

[656]

Agricultural Credit

*433 2.81 The average level of earning of farmers being rather low, most of them
452 require credit facilities for making improvements in their land. According to a survey, conducted in 1960 by the Bureau of Economic Studies, 89 per cent of the farmers need credit of some type. It also reveals that 82 per cent of the farmers need short term credit while medium and long term credit are needed by 56 and 34 per cent of farmers respectively. On the basis of the findings of the survey, the annual agricultural credit needs for the whole State may be put at 32.8 crores, of which Rs. 18.67 crores would be in the nature of short term credit, Rs. 6.74 crores medium term credit and Rs. 6.5 crores long term credit. The garden crops would account for Rs. 21.6 crores and paddy Rs. 11.2 crores.

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2.82 Against this, the total amount distributed through organized institutions in 1958-59, was only Rs. 2.49 crores. This leaves a large gap which is probably being met by money lenders who generally charge high interest rates. Since intensive agricultural development programme as suggested here would require large amounts of working capital for the various types of farm expenses, the need for expansion of rural credit facilities through organized institutions cannot be overstressed.

PLANTATION CROPS

2.82 The predominant place occupied by commercial plantation crops in Kerala's agriculture, both in terms of area covered and net value contributed, has been stressed previously. In view of their importance to the Kerala economy, they deserve a high priority in the development plans of the State. The plantation crops of Kerala include pepper, cardamom, arecanunt, coconut, rubber, coffee and tea. Since most of these crops are perennial and have a time lag of 5-7 years between the stage of plantation and crop maturity, their future development programme should be viewed on the basis of a long term perspective of 20-30 years. The extension of area under these would not result in any immediate increase in output. However, quicker increases in production are possible from existing area under these crops through increase in yields per acre by the adoption of better techniques, etc. There is considerable scope for improvement in the methods of cultivation. It is thus necessary to devise, both short term and long term programmes for development of plantation crops in the State which are discussed below separately for each cash crop.

Coconut

2.83 Coconut is the most important cash crop of Kerala. Natural conditions in this State are ideal for cultivation of coconut. The crop thrives well along the sea coast and in the interior up to an altitude of 1,500 feet. Kerala accounts for about 70 per cent of the area under coconut in India and for over 80 per cent of the copra and coconut oil produced in the country. Coconut is important to the Kerala economy in a number of ways. First, the outer husk goes to support the most important cottage industry of the State, viz., coir industry. The kernel is used for edible purposes and in addition it is the mainstay of a large number of coconut oil millers. Coconut oil, in turn, forms a raw material for the soap industry. Directly and indirectly this crop provides employment to over 5 lakh persons.

2.84 Coconut is not a regular plantation crop since it is not grown on large tracts as in the case of rubber, tea and coffee. It is grown in scattered patches along paddy fields, river banks, backwater stretches and in the compounds of residential houses. In view of these complexities it is difficult to estimate the precise area under coconut but rough estimates show that the area under coconut in Kerala is about 1.1 million acres. The district of Kozhikode has the highest (250,884 acres) and Palghat the lowest (11,556 acres) acreage.[1]

[1] The figures refer to 1958-59 crop year.

11: India G-4, 5 (1960-1961) 1962 AWll Kerala AWll

Since this is a matter of all-India policy, the State Government should press the Central Government for an early action on this.

2.100 Tea estate lands are leased to growers by the Government. Most estates hold lands in considerable excess of areas which actually bear tea. Government should compel the lessees to undertake planting tea in all the suitable areas ; failing this, the surplus lands may be taken back from the lessees by the Government.

2.101 A programme of replantation of at least 10,000 acres per year would be necessary during the Third and Fourth Plan periods, specially to compensate for the past neglect. Fresh leases need not be granted for this purpose as there are vast uncropped areas adjacent to tea estates in the areas already leased. Pressure, inducement, incentives in the form of replantation loans and the supply of materials may be employed to achieve the desired results. Estimates of cost of bringing an acre up to the bearing stage vary from Rs. 2,150 to Rs. 3,650 per acre. Adopting the estimate of the Tea Planters Association at Rs. 2,500 per acre, the total investment necessary to raise 10,000 acres of new plantings per year for the next 10 years would be of the order of Rs. 25 crores.

2.102 *Size of the Plantations*: In 1957, there were 282 estates in Kerala. The average size of tea gardens in the State is 350 acres. However, about 50 per cent of the estates were less than 200 acres in area. For economic functioning of a tea estate, it is necessary to have a modern tea processing unit (generally known as a tea factory) attached to the garden. Different estimates show that to be an economic unit, a tea factory needs 822,000 lbs. (about 10,000 maunds) of green leaves a year and to produce this quantity anywhere from 250 to 300 acres of tea acreage would be needed. If this is accepted as a norm, it may be said that about half the tea estates in Kerala are uneconomic. This is indeed a serious problem, since the economic functioning of an estate as well as the quality of tea produced depends on the size and the type of processing machinery employed. An increase in the size of all the plantations with an area below 250 acres is necessary. Long term replantation loans and fresh leases of land, if available, are suggested as measures to correct the existing imbalance.

Rubber

2.103 Kerala holds almost complete monopoly in the sphere of rubber production in the country. Kottayam has the largest concentration of rubber acreage in India. During 1958, Kerala produced 22,159 tons of rubber valued at Rs. 7.69 crores, out of a total all-India production of 25,000 tons. The rubber plantations also employ a large labour force of approximately 80,000 persons.

2.104 Soil, climate and other natural conditions found in Kerala are quite well suited to the growth of rubber plants except that rainfall is not as well distributed over the year as in some other rubber growing areas of the world, such as Malaya and Ceylon. This factor has had a somewhat adverse effect on the yields, which might otherwise have been higher than the present level of 294 lbs. per acre.

2.105 During the last decade there has been a sharp increase in the area under rubber. Between 1951 and 1958 it increased by 90 per cent, that is, from 141,760

11: India G-4, 5 (1960-1961) 1962 AWII Kerala AWII

But much of this increase is the consequence of a greater diversification in agricultural activities with a view to reducing unemployment and under-employment among family labour and raising the family income. Poultry-keeping has, of late, become very popular with the rural families and it is unusual to find families in the rural areas which do not rear at least a few laying birds. Kerala produced 137 million eggs (hen eggs—114 million; duck eggs—23 million) in 1951, and ranked fifth among the States in egg production. Production of eggs is now much higher and may be around 200 million. Kerala is also the biggest exporter of eggs. These are sent as far as Punjab in the north, Calcutta in the east and Bombay in the west and even to foreign countries, mainly Ceylon.

Low Productivity of Livestock

3.5 On an average a cow yields 330 lbs. of milk per year, a buffalo 619 lbs. and a goat 40 lbs. These yield rates compare very unfavourably with those for other parts of India (Table 16).[1] The low productivity of animals is partly due to the poor inherent breed characteristics and partly due to the conditions under which they are reared. The cattle found in Kerala are all of a non-descript type. They are small in size and build. They are stunted in growth. Buffalo in Kerala weighs about half of its counterpart in U.P. or Punjab. The same is true of other livestock too.

3.6 The livestock, especially the bovines, are reared under unwholesome conditions. They are under-fed. The bulk of the ration consists of roughages, mostly rice straw, and is grossly deficient in proteins and other protective properties. The livestock feed available in Kerala is also highly deficient in some of the important bone-building minerals such as calcium and phosphates. This is a direct consequence of a high rainfall which has leached off most of these minerals from the root zones of soils. In the absence of adequate phosphatic and calcium soil amendments, the crops grown in such soils are poor in these minerals. Lack of minerals has a telling effect on the health, build and general condition of the livestock of Kerala. The small size and build are important causes responsible for their low milk yield and poor work output.

3.7 Nutritional deficiencies lead to a number of serious consequences. Poor health results in low vitality and resistance to diseases as well as a low rate of nutritional utilization from feeds. All these factors are responsible for a low level of efficiency and other hazards such as a high rate of mortality and a low rate of fertility. However, realizing the reasons for low productivity, many enlightened farmers have taken to scientific rearing of livestock and have started adding concentrates, such as waste grains, oil cakes and mineral mixtures to the cattle feed. Credit for this goes to the State's Animal Husbandry Department which has been making special efforts to educate the peasantry on the need for adding mineral mixtures to the livestock feed. The Department has been distributing mineral mixtures to farmers at subsidized rates in order to popularize them.

3.8 In view of the very poor quality of livestock in the State there is an urgent need for developing animal husbandry in Kerala. Although animal husbandry

[1] [Table 16, appearing on p. 282 of the text, has not been processed — Analyst]

11: India G-4, 5 (1960-1961) 1962 AWll Kerala AWll

Although animal husbandry programmes do not create any significant increase in direct employment opportunities, they do help in reducing the degree of unemployment situation within the family. Moreover, some of the animal husbandry activities such as piggery, poultry-rearing, and bee-keeping need little investment to start with and are quick to yield returns.

3.9 Development of animal husbandry on commercial lines by individual rural families may not be possible without adequate State action. Aid should be given for implementing measures of improvement with a view to increasing the efficiency and productivity of the livestock. The aid could be given int he form of easy loans, development of marketing and processing facilities, sale of feed and fodder at reasonable prices, etc. These are discussed in the subsequent paragraphs separately for cattle and other livestock.

CATTLE DEVELOPMENT

3.10 The output of milk from cattle and buffaloes as well as draught capacity can be improved through a scientific breeding programme and the prevention and control of diseases. As stated previously, cattle found in the State are of non-descript types. Unless they are imparted with high productivity genes, any amount of improvement in feeding and rearing will not be of much use beyond a particular stage. It is, therefore, necessary to concentrate on improving the breed of cattle and buffaloes. There are two ways of tackling this problem: (*i*) selective breeding and (*ii*) mass upgrading.

3.11 The former is not feasible, as there may not be enough cattle to start with if rigid norms are employed for selection. There will also be the problem of finding suitable means of disposal of the useless cattle. The practical solution under these circumstances would be to resort to a scheme of mass upgrading according to which the local bulls are to be replaced with bulls of some outside breed, suited to local needs and conditions. To be really effective, the upgrading programme should be made to cover the entire State and should stretch over a span of at least four decades. During this period, no bulls, other than the approved ones, should be allowed to sire.

3.12 The value of the upgrading programme was realized in Kerala a few decades ago. The scheme was introduced on a large scale during the First Plan by starting five Key Village Schemes. The number was raised to 14 in the Second Plan. It is estimated that by 1965-66, it would be possible to cover about a quarter of the eligible milch cattle under the Key Village and Artificial Insemination Schemes. But even though the programme is well conceived and implemented, the NCAER team was left with the impression that the scheme had not made any significant impact in the improvement of cattle and buffalo breeds in the State. Apart from the inadequate coverage of the programme, non-elimination of the local or scrub bulls is a serious problem. For success and effectiveness of the upgrading programme, it is, therefore, necessary, first, to implement the programme intensively all over the State and secondly, competition from the local bulls should also be eliminated by compulsorily castrating all the males before they reach the fourth year of their life. These suggestions may be implemented during the Third Plan.

11: India G-4, 5 (1960-1961) 1962 AWII Kerala AWII

part of poultry population still consists of the indigenous types despite the introduction of high yielding exotic breeds such as Rhode Island Reds and White Leghorns in the early thirties. The local breeds give 50 to 60 eggs a year, while the average by the White Leghorn and Rhode Island Reds in the Government farm is 186 and 172 eggs respectively.[1] This can convey some idea of the magnitude of unexploited potential in the poultry industry.

3.18 Commercial poultry-rearing as a subsidiary occupation by the farmers has come to be recognized as the quickest and the easiest way of increasing farm incomes and providing employment to the under-employed. In view of these advantages, poultry industry has a special appeal in Kerala. It has been estimated by some experts that through replacement of indigenous birds with the exotic ones, the contribution from this sub-sector to the total State income could be more than doubled. This would be possible in less than five years, provided the pullets of desired types are made available to the farmers in adequate numbers at a low cost. The State should strive to achieve this by opening a large number of poultry extension centres. It is suggested that by the end of 1965-66 there should be at least one poultry extension centre in each Community Development Block. During the Third Plan, 143 additional centres may be opened and all these should work in close association with the block cooperatives. An investment of Rs. 35.75 lakhs would be needed to start the proposed centres.

3.19 Duck-rearing is done only on a small scale in the State in spite of the fact that conditions in most parts of Kerala are very well suited for commercial duck-keeping. Vast inland water resources and the abundant fauna in them is an ideal condition for large scale commercial duck-rearing. There is good demand for duck products particularly in Calcutta and Ceylon but this export potential could be developed only when the fowls are bred in sufficiently large number. It is, therefore, suggested that this potential should be fully exploited and the State should take adequate steps in the matter. In order to make the programme economical, some of the poultry development blocks may include multiplication of suitable duck breeds for distribution. Efforts may be made to select the best from the local birds and rear them for producing pullets for distribution.

Rearing of Goats

3.20 Goat-rearing under stall-fed conditions is customary in Kerala. This is quite contrary to the practice found in other parts of the country, where the goats are let out during the major part of the day for free browsing. Rearing of goats, as it is practised in Kerala, does not lead to dangers such as suppression of vegetation, crop destruction, etc.

3.21 Goats are reared both for milk and meat. The average milk yield per goat is low, 40 lbs. per annum, as against the all-India average of 127 lbs. (Table 16). This is due to poor management and general malnutrition, but could be easily raised to the all-India level with improved feeding and better care. As a matter of fact it is not unusual to find goats yielding as high as 400 to 500 lbs. of milk in urban households and this is due to better management.

[1] *Administration Report of the Animal Husbandry Department, 1957-58*, Government of Kerala, 1959.

Chapter 4

Forests

FORESTS RANK AMONG the key resources of Kerala. Estimates of the area under forests differ widely. According to the Revenue Department figures, the area under forests is 24.58 lakh acres, that is, 26.2 per cent of the total area of Kerala. According to the Forest Department, the area under its jurisdiction is 22.28 lakh acres. Private forests account for another 4.80 lakh acres thus giving a total forest area of 27.08 lakh acres (30 % of the total area). Whichever be the correct figure, it is clear that the proportion of area occupied by forests is much higher in Kerala than the average for the whole of India (17.2%).

4.2 Apart from the importance of forests as a source of raw material for the industry, and timber for other uses, forests have a moderating effect on the climate and act as a vegetal cover protecting the soil from erosion. The position in Kerala is quite satisfactory in respect of the protective function of forests. A large number of perennial tree crops like coconut, arecanut, cashewnut and rubber are also grown in the State. Their effectiveness in protection of the soil and influence on climate is as great as in the case of the forests. These perennial crops, therefore, act as a useful subsidiary to the actual forest growth.

4.3 The quality of forest growth of Kerala is also of a very high order. During 1955-56, forests contributed Rs. 5 crores,[1] that is, 1.4 per cent of the State income, which is almost double the all-India average (0.7%). Per acre yield of forests is also higher in Kerala. Whereas it was Rs. 5.6 per acre on an average for India, it was as high as Rs. 18 per acre in Kerala during 1955-56. Employment potential of forests, however, is quite meagre in relation to the area they occupy. Forests in Kerala employed only 19,000 workers, that is, 0.35 per cent of the total working force (all-India 0.4 %). Forests generally require only a few hands to work as the maintenance staff and as labour for extraction and logging.

Type of Forests and their Regional Distribution

4.4 The high yield and the large variety of important commercial species grown in the State are a consequence of the climatic and topographical features of the State. Kerala gets the benefit of south-west as well as north-east monsoons. As a result of these, the State is well assured of a good rainfall which, in addition, is fairly well

1. Appendix 2 explains the method of calculation.

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313 be so regulated as not to disturb the present symbiosis between the plant species present. Intensive research is, therefore, urgently required to find ways and means [654] of inducing adequate regeneration of the evergreen forests. There are at present two research stations in the State at Malayathur and Nilambur. The location of a third station in the evergreen forest areas is recommended.

Eupatorium

137 4.25 A problem that has been engaging the attention of the Forest Department is that of the weed eupatorium. It got introduced into the State from Assam at the end of the Second World War by some ex-service men who had served in Assam. The weed has spread like wild fire throughout the State and has become a serious [654] menace. Recent research carried out by a biochemist in Trivandrum has found a use for this shrub in the manufacture of fertilizers. Further research may be carried out to find its fruitful uses.

Tribals

*433 4.26 A few tribes reside within the forest areas. They are allowed free grazing 162 rights and privileges of cultivation, free of assessment. However, this does not provide 404 them with a full-time occupation. On the other hand, it is not possible to arrange for their migration to midland or the coastal region because of the high pressure of [245] population which exists in these areas. It has, therefore, been suggested in this Report, that two labour colonies should be formed in grass land *sholas* where large scale planting of *Eucalyptus Grandis* is taking place. This labour force could later be employed in the proposed newsprint mills when they come up.

RECENT DEVELOPMENTS

*433 4.27 During the First Plan period there was no forest development scheme. A 313 beginning in forest development programmes was made only during the Second Plan. 654 An amount of Rs. 1.24 crores out of a total Plan outlay of Rs. 87 crores was earmarked for forest development plans in the Second Plan period. By the end of 1959, however, only Rs. 21.68 lakhs had been spent. The shortfall arose mainly on account of two items. The largest single item among forestry was acquisition of private forests in Malabar and for this Rs. 40.95 lakhs had been allotted. Due to procedural difficulties, this could not be undertaken and only Rs. 0.34 lakhs had been spent by the end of 1959. Secondly, although the progress of cashewnut afforestation programmes in terms of physical target has been statisfactory, as can be seen from Table 24, the cost of afforestation programmes at Rs. 24 lakhs was an over-estimate. Actual performance has been possible within Rs. 4.81 lakhs.

4.28 Table 24 gives the Plan provision and progress in execution of various schemes upto the end of 1959. Overall progress has been slow, except in the raising of plantations where the Department hopes to achieve all the targets. The slow progress

2 [Table 24, appearing on p. 287 of the text, has not been processed - Analyst]

Chapter 5

Fisheries

KERALA IS THE leading fish producing State in India. Its present production of fish amounts to about 310,000 tons. Maharashtra comes next with an output of 210,000 tons. Over 80 per cent (260,000 tons) of the fish landings are obtained from the sea and the rest from inland sources. About 75,000 tons of fish (70,000 tons cured and 5,000 tons fresh) are at present annually exported to other parts of the country, and 2,000 tons (frozen and canned) are sent abroad. Allowing for a very negligible import, the net quantity available for local use comes to 235,000 tons per annum.

5.2 Fish eating is popular in this State. About four-fifths of the population are accustomed to taking fish regularly. At present the per capita consumption of fish in the State is 41.30 lbs. per year for the fish eating population and 33.00 lbs. per year for the total population, as against 9.50 lbs. and 6.10 lbs. respectively for India as a whole.

5.3 About 85,000 persons (1.60 % of total labour force) are directly engaged in fishing activities and they produce a net output of Rs. 5.60 crores (1.60 % of State income). The standard of living of an average fisherman in Kerala is very depressed. The average annual income of a fisherman's household in Kerala, consisting of 6.40 members, is estimated at Rs. 542, or only Rs. 85 per fisherman, that is, about one-third of the average per capita income in the State.

PRESENT STATUS OF FISHERIES

Marine Fisheries

5.4 *Coastal Fisheries*: Although Kerala has a comparatively short coastline (10% of all-India) Kerala ranks first in the production of marine fish (about 30% of all-India Production—Table 25). Large marine fish catch can probably be attributed to the much more intensive fishing effort made in Kerala. In 1957, the ratio of man-hours per mile of coastline came to about five times the average for other States. This heavy fishing pressure is paralleled by the high pressure of population on land, leading to an intensive use of the natural resources. Intensive fishing is not only confined to the number of hours of fishing put in, but it also includes the use of more efficient methods. It will be seen from Table 26 that the catch per man-hour of fishing in Kerala compares favourably with that in the other States.

[Tables 25 & 26 appearing on p. 288, have not been processed -- Ans.]

Chapter 6

Minerals

FROM THE POINT of view of its industrial development, Kerala's mineral resources are a weak link in the State's economy. With a share of only 1.7 per cent in the all-India production of the minerals, Kerala lags behind most other States in the output of minerals. During 1955-56, the net value contributed by the minerals (Rs. 1.95 crores) was 0.6 per cent of the State income against one per cent of country's income.

6.2 The important minerals of the State are beach sands comprising ilmenite, monazite, rutile, sillimanite, zircon, china-clay and tile-clay. Among these ilmenite and china-clay are the most prominent. The reserves of these minerals are adequate to last more than 20 years and may, therefore, be classified as "minerals with adequate reserves". Graphite, iron ore and mica are also found, though only in very small quantities. The deposits of limeshells occur in lakes and along the coast, but are rather modest in content. The metallic minerals and fossil fuels, however, are almost completely absent. It is the deficiency of these minerals which presents an obstacle to the growth of large scale industries.

6.3 Apart from beach sand collection and limeshell winning from the lakes and estuaries, there are eleven workings, all open cast. These do not include tile-clay working about which no data is available. The number of persons engaged in all these 11 mining enterprises (inclusive of beneficiation) is roughly 6,900. However, according to 1951 Census, the number of persons employed in mining as well as in stone-quarrying is about 18,000, i.e., 0.3 per cent of total working force (all-India 0.4%).

6.4 Table 28 gives the output of minerals from the various workings and their value. In 1955, the value of minerals production was Rs. 1.35 crores. Next year, the value of production went upto Rs. 1.95 crores, representing an increase of approximately 37 per cent. This steep rise was mainly due to the increase in ilmenite production, which went upto 314,348 tons in 1956 from 231,585 tons in 1955. Production registered a further increase of about Rs. 20 lakhs during the next year, (that is, 1957), reaching a level of Rs. 2.1 crores. This was maintained during the next two years, that is, 1958 and 1959. In 1960, however, there was a setback as one of the mineral sand companies had since closed down; and it is likely that the value of the output might not have exceeded Rs. 1.3 crores.

[Text continues on p. 92]

[Table 28 appearing on p. 289 of the text, has not been processed -- Analyst]

6.67 In the erstwhile State of Travancore-Cochin, there were 14 centres of production around Cape Comorin and one at Malipuram, Vyppeen Island, Ernakulam district. Consequent upon reorganization of the States, there is only one salt work in Kerala today. This is reflected in the sudden drop in production to a few hundred tons of salt between 1955 and 1956.

6.68 The prime requisite for the manufacture of salt by the solar evaporation method is a dry climate with accompanying low humidity. Such a condition is rarely obtained anywhere in the State. The result is that the yield of salt is very low with the cost of production at 75 nP. to a rupee per maund (in Tuticorin—cost of production is 25 nP.). In view of the unfavourable climatic conditions, this industry does not appear to have much prospects in the State.

Tile-Clay

6.69 Tile-clay is the raw material for one of the major industries of Kerala viz., the tile industry. More than 150 tile factories operate in the State, providing employment to over 10,000 workers. Tiles produced are sent to other parts of India as well as to markets in some of the Far Eastern countries. The exports are mainly from the Feroke area.

6.70 Local earths, silts and clays are found along the alluvial flats of most of the rivers of the State. Clay collection is seasonal and is undertaken through contractors. It provides employment to about 3,500 people. Collection is done manually and the clay is transported by countrycrafts along the waterways, or by roads, where water transport facilities are not available. Depending on the distance of transportation, the price of clay varies from Rs. 2 to Rs. 5 per ton at the factory.

6.71 In 1865, the 'Basel German Industrialists' started the first tile factory in the country at Mangalore with the object of securing the Far East Market, which was until then being supplied by the French tile industry in Marseilles. The industry then spread rapidly, first to Feroke near Kozhikode and later on to Quilon and other areas, until today, Kerala can well claim to be the home of the tile industry in the country.

6.72 Production of tile-clay in the State during the last few years is given in Table 31.[1]

6.73 As can be observed, there has been a declining trend in tile production. The main part of the decrease has taken place in the major tile producing areas of Trichur and Quilon.

6.74 The decline in output of tiles is due to a shrinkage in the foreign markets. On the other hand, an optimum area for distribution within the internal market is a belt of 400 miles from the coast. In view of the near saturation point which Kerala's tile industry has reached, prospects for increased production of tile-clay are rather bleak.

Other Minerals

6.75 *Gold* : Occurrences of gold in Wynaad and Nilambur area have been known since the late nineteenth century. The discovery of old workings led to the

[1] [Table 31, appearing on p. 291 of the text, has not been processed -- Analyst]

11: India G-4, 5 (1960-1961) 1962 AWll Kerala AWll

Chapter 7

Power

KERALA HAS IMMENSE potentiality for the generation of hydro-electric power. The State does not possess any resource of coal or oil (within its own boundary) for generation of power but there are 44 rivers which constitute a storehouse of hydel power. This favourable factor compensates for the absence of any fossil fuels. Investigations so far have led to an estimate of this potential to be roughly of the order of 1,539 MW.[1]

7.2 One of the basic problems of Kerala's economy is posed by the situation of acute unemployment prevailing in the State. A long run solution to this lies in an intensive programme of industrialization only. An accelerated pace of industrial development, in turn, requires an ensured supply of adequate power. One possible way of looking at power development activities is to consider power as a complementary factor in the programme of industrialization of the State. Targets for power generation capacity in such cases should be fixed slightly higher than what the demand is expected to be.

7.3 The alternative approach, which is the more feasible one for Kerala, is to consider power, generation itself as an industry and to develop the State's abundant hydro-power resources to the maximum extent possible. The surplus of electricity generated over local requirements could be exported to the neighbouring State of Madras, which is not so well placed in respect of its power resources as Kerala. The electricity exported would provide a means of earning revenue, which is turn could be utilized for capital formation within the State. Moreover, a surplus in power generation capacity is desirable in itself since for a State like Kerala, where some factors deterrent to industrialization have been operating in the past, a regular supply of adequate power should be made to act as an incentive for setting up new industries. Planning for a power surplus and export of electrical energy to the neighbouring States should, therefore, form the keynote of the future power development policy in the State.

DEVELOPMENT OF POWER

7.4 The process of power development in the State is already well set. What is now required is to harness the huge energy potential of the State and convert it

[1] By the Central Water and Power Commission.

[Text continues on p. 112]

11: India G-4, 5 (1960-1961) 1962 AW11 Kerala AW11

embark and disembark every month at the two airports of the State in Trivandrum and Cochin.

8.3 The State's transport system has to meet not only the requirements of the internal movement of traffic and the needs of inter-State and overseas trade and commerce of the State, but also the traffic connected with the import and export trade of adjoining areas in the neighbouring States. Calicut and Cochin provide suitable inlets and outlets for the intake of oil fuels, cotton, hardware and machinery, fertilizers and foodgrains, and for exports of tea, coffee, etc.

The Transport System

8.4 The transport system of the State consists of:

A. Sections of the Southern Railway, 543 miles long; (broad gauge 331 miles; metre gauge 204 miles; mixed gauge 8 miles), serving port-towns such as Cochin, Quilon and Calicut, and other important industrial centres.

B. A road network made up of national and provincial highways (1,432 miles) and district and village roads (9,307 miles).

C. A unique inland waterway system of navigable rivers and coastal and cross canals, 1,178 miles long.

D. Thirteen ports, including a major port at Cochin, and two active minor ports at Calicut and Alleppey.

E. One hundred and eleven statute miles of airways, with airports at Trivandrum and Cochin.

8.5 Nearly 145,000 persons,[1] constituting 2.93 per cent of the working force of the State are engaged in transportation and account for an annual income of Rs. 8.697 crores.

8.6 The features of this system, particularly in relation to the physical and financial (investment) demands that the growth of the State's economy may make on it in the coming decade (1961–71) are highlighted here for each medium of transport.

THE RAILWAYS

8.7 In relation to the extent of area served (14,992 sq. miles), the railway mileage per 100 square miles of State territory (3.6 miles) compares favourably with all-India (2.7 miles) and Mysore (2.2 miles); Madras State is better served with 4.4 miles per 100 square miles. The railway mileage per 100,000 of population in the State is however, only 3.4 miles, slightly less than a third of what it is for all-India, viz., 9.5 miles. The corresponding figures for the adjoining States of Mysore and Madras are higher being 6.2 and 5.6 miles respectively. The comparatively lower average

[1] 1961 Census figures.

[Text continues on p. 127]

Chapter 11

Manpower and Employment

PART I: MANPOWER

ONE OF THE chief problems of Kerala today is the vast unemployed section of its manpower. An appraisal of the analysis of employment prospects, therefore, becomes very important. The extent of urbanization, sex distribution, the size of the labour force, its rate of participation, and occupational distribution—all these are, therefore, studied in detail in what follows.

Urbanization

11.2 Progress in urbanization in Kerala is less as compared to the country as a whole. Of the total population of Kerala, 13.5 per cent live in urban areas against 17.38 per cent for the whole of India according to the Census of 1951. The degree of urbanization has been progressively increasing over the past few decades. This is shown by the table below which gives the relative rates of growth of the urban and rural population during the period 1921–51. As may be seen, urban population has been growing at a faster rate than the rural population.

MEAN DECENNIAL GROWTH RATE OF POPULATION

(Per Cent)

	1921–30	*1931–40*	*1941–50*
Urban	27.18	23.26	29.38
Rural	22.85	16.53	20.12
TOTAL	23.31	17.37	21.22

N.B.: It may be noted that these figures pertain only to the old Travancore-Cochin State.

SOURCE: *Census of India*, Volume XIII, Travancore-Cochin (Part I, Subsidiary Table).

11.3 During the last decade, that is, 1951–61, urbanization seems to have increased at a somewhat faster rate than in the whole of India. The proportion of population living in urban areas of Kerala grew from 13.05 per cent in 1951 to 15.03 per cent in 1961, whereas in the case of all-India the proportion registered an increase from 17.38 per cent to only 17.84 per cent.[1] In view of the plans for a faster growth of industries,

[1] As pointed out in Chapter 1, too much reliance should not be placed on a comparison of urbanization between 1951 and 1961 since the definition of urban areas during the two Census operations has not been the same.

the trend towards a high rate of urbanization may be expected to continue during the coming decade.

Sex Distribution

11.4 One of the interesting demographic features of Kerala is its sex distribution which shows an excess of females. Out of a total population of 16.88 million[1] in 1961, females (8.53 million) outnumbered the males (8.35 million) by 0.18 million giving a sex ratio of 1,022 females to a thousand males (all-India: 940 females to 1,000 males). The proportion of females in the population had been rising successively over the past few decades till 1951, but during the past decade it has shown a slight tendency to fall as shown by the following table:

SEX RATIO (KERALA STATE)

Year	*Female per 1,000 males*
1901	1,004
1911	1,008
1921	1,011
1931	1,022
1941	1,027
1951	1,028
1961	1,022

11.5 The excess of females is especially marked in the working age groups. Whereas in the age group 0-15 years males exceeded females in the ratio 100: 97.7, in the age group 15-55 years the position was reverse, there being 100 males to 106.5 females. (1951 Census)

11.6 The pattern of sex distribution in the rural and urban areas is broadly similar to that in the rest of India. Females are generally found to be more predominant in the rural areas. In Kerala this contrast is quite marked as can be seen from the fact that rural sex ratio is 1,034 to a 1,000 males against the urban ratio of 990 to 1,000. The cause of this rural-urban difference is rooted in the sociological factors, the most important of which is that the males generally come over to the towns for earning their livelihood, leaving behind other members of the family in the villages.

Age Structure

11.7 Age structure is an important determinant of the proportion of economically active persons in the population. An economy with a high proportion of older people is necessarily less dynamic than an economy with a large element of younger blood. Table 56 gives a comparative picture of the age structure of the population in Kerala and in India, according to the Census of 1951.

[1] *1961 Census* (Provisional Population figures).

[Table 56, appearing on p. 309 of the text, has not been processed -- Analyst]

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162 464 11.8 In the context of an under-developed economy like that of Kerala, it is difficult to define distinct boundary lines for the working age group, since participation in economic activity starts at an early age and at the other end of the ladder there is no fixed age of retirement. However, taking 15-55 years, as roughly representing the age group within which people actively take part in work, 53.3 per cent of Kerala's population belonged to this group against 52.4 per cent for all-India. It will also be noted from Table 56 that the working age group of the population in Kerala has a larger component of younger people than in all-India. A higher proportion of persons fall within the category of 15-25 years in Kerala while the reverse is the case with those in the age group 25-55 years.

LIVELIHOOD CLASSIFICATION

11.9 The table below gives the comparative break-up of the population of Kerala and all-India according to the sources of livelihood (1951 Census data).

DISTRIBUTION OF POPULATION

	All-India (in million)	*Percentage to total population*	*Kerala* (in million)	*Percentage to total population*
Total Population	356.7	100.0	13.5	100.0
Self-supporting Persons	104.8	29.4	3.7	27.4
Earning Dependents	38.4	10.8	0.8	5.9
Non-earning Dependents	213.5	59.8	9.0	66.7

It will be noticed that the proportion of non-earning dependents is very high in Kerala. In fact, it is the highest in India with the exception of Madras. The burden of dependence, therefore, is very acute in Kerala.

Working Force and Participation Rates

11.10 The converse of a high rate of dependence is the low proportion of working force to the total population. Working force is defined as that section of the total population which takes part in productive activity. In terms of the classification in 1951 Census, the earners, that is, self-supporting persons and the earning dependents comprise the working force. The ratio of working force to the total population in any sector of the economy is defined as the sectoral participation rate.

11.11 According to the 1951 Census, Kerala had a total working force of 45.4 lakhs.[1] The general participation rate, that is, the rate of total working force to total population works out to only 33.5 per cent against a much higher figure of 39.9 per cent for the whole of India. Table 57 gives a break-up of general participation rate in terms of sectoral rates. This table reveals that it is the rural participation rate which is primarily responsible for this wide divergence between Kerala and India. Whereas Kerala's urban participation rate is only about 2 per cent less than the all-

[1] *Vide* Appendix 2 for the method of calculation.

2 2 [Table 57, appearing on p. 309 of the text, has not been processed - Analyst]

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India urban participation rate, in case of rural participation rate, the difference is almost 8 per cent.

11.12 As a general rule the difference between rural and urban participation rates is about 6 to 7 per cent. In Kerala, however, this difference narrows down to 1.3 per cent. This is primarily due to an abnormally low rural participation rate, the causes for which are analyzed below.

11.13 It was mentioned earlier that the population of Kerala has a very high proportion of females and that this is particularly marked in the working age group. Since the proportion of females taking part in economic activity is generally less than that of males, this difference being particularly marked in Kerala (Table 57), it naturally tends to pull down the participation rates.

11.14 The participation rate in the lower ranges of age is very much influenced by the proportion of school-going children. It is well known that the standards of primary education in Kerala are the highest in the whole of India. About 18 per cent of population attends schools and colleges against only 8.31 per cent in the whole of India. This is an important factor in reducing the rural participation rate.

11.15 The size of working force is also a function of the opportunities available for work. The agricultural sector of Kerala is highly over-populated, the size of average holdings being only 1.5 acres (all-India 7.5 acres). Moreover, due to the predominance of perennial crops, cropping pattern in Kerala is much less labour-intensive than in the other parts of India.[1] That the agricultural sector of Kerala is comparatively less labour-absorbing is confirmed by the very low participation rate in the agricultural sector of Kerala in comparison to the non-agricultural sector. (Table 57). These are some of the factors limiting the scope for gainful employment in the rural areas.

Past Trend

11.16 The table below gives an indication of the trend of the general participation rate as indicated from the last three Census operations:

TREND IN PARTICIPATION RATE—1931, 1941 AND 1951

	Population Density	*Participation Rate** (In per cent)	*Total Population* (In lakhs)
1931	634	48.0	95.2
1941	737	36.6	110.37
1951	905	36.1	135.6

*These figures have to be used with reservations since the concepts in successive Censuses were different. However, suitable modifications have been made to make them broadly comparable.

N.B.: Population density and population figures are for Kerala, while participation rate figures are only for Travancore-Cochin.

[1] Chapter on Agriculture and Plantations.

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The fall in the participation ratio between 1931–51[1] may be attributed to three factors:

(*i*) Rise in the sex ratio in favour of females.
(*ii*) Increase in the school-going population.
(*iii*) Slow growth in employment opportunities.

11.17 The force of the first two factors, however, is not sufficient to explain the steep decline in the participation rate. A fall of the magnitude, as shown in the above table, primarily indicates that the increase in opportunities for gainful employment has not been keeping pace with the growth of population which had increased by over 40 per cent between 1931 and 1951 without any corresponding growth of industries or development in other sectors.

REGIONAL VARIATIONS IN POPULATION DENSITY AND MANPOWER

11.18 Kerala is the most thickly populated State of India having an average density of 1,125 persons to a square mile according to the Census of 1961. The population, however, is not uniformly spread out as may be noticed from the district density figures in Table 58.[3] Malabar is less thickly populated than the Travancore-Cochin area. But the proportion of working force to total population, that is, the participation rate is also lower in the Malabar area. Generally, it is expected that participation rate would be lower in the more congested areas, because an over-crowded agricultural sector naturally offers limited scope for employment. The comparison of Travancore-Cochin and Malabar, however, seems to belie this conclusion. The reason for this contrast perhaps lies in the fact that the major part of the coir industry, the most labour-intensive industry of Kerala, is concentrated mostly in the Travancore-Cochin region.[2] Absence of this industry on a large scale in Malabar seems to account for a lower participation rate in that area.

Occupational Distribution

11.19 Occupational pattern generally gives a broad idea as to the stage of economic development attained by a country or a region. The distribution of working force between agricultural and non-agricultural sectors, is given separately for the rural and urban sectors, in Table 59.[4] A comparison with the all-India occupational distribution brings out a marked contrast in the case of Kerala. Whereas 71.8 per cent of the working force was engaged in agricultural occupations in the whole of India, in case of Kerala the proportion was only 51.4 per cent. In fact in Kerala the proportion of its population dependent upon non-agricultural activities turns out to be the highest in the whole of India.

[1] The difference in the concepts used in 1931 and 1951 Censuses perhaps exaggerates the extent of decline in the participation rates, but it does convey some idea of the fast deterioration in the unemployment situation over the years.

[2] Both these aspects have also been dealt with in Chapter 1.

3, 4 [see p 310, category 116 -- Analysis]

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11.20 As a general rule one associates a high proportion of working force engaged in non-agricultural activities with a high level of industrial development. However, the structure of industries and income contributed by industries[1] do not bear out this contention. Moreover, the Census of 1951 shows that 75 per cent of the non-agricultural population lives in the rural areas. This only goes to prove that the major part of non-agricultural activity is not organized on the lines of modern large scale industry but is composed of occupations more allied to agriculture which are located in the rural areas.

11.21 Two factors, which have already been referred to in a different context,[2] seem to be responsible for this peculiar type of occupational structure. These are:

(i) *Predominance of Perennial Crops*: Over 40 per cent of gross cropped area is covered by these crops (all-India 10%). Since these crops, once they are sown, require comparatively little labour for looking after them, tend to reduce the proportion of working force to the population engaged in agricultural activities.

(ii) *Small Size of Holdings*: Super-imposed upon this is the fact that the average size of holdings in Kerala is very small. This tends to push people away from agricultural to non-agricultural avocations. Coir industry, which is mostly located in the rural areas, is an important example of such non-agricultural occupations.

Changes in Occupational Structure

11.22 Between the Census of 1931 and 1951 population dependent upon agriculture increased from 34.2 per cent to 53.84 per cent. It brings out one fact quite clearly. Although the non-agricultural sector is quite large in terms of its existing employment potential, it has not been dynamic enough to grow at a rate sufficiently large to absorb the growing population. One other consequence of a growing reliance on agriculture, in spite of the congestion already existing there, is the rising proportion of agricultural labourers to total population. Cultivation of owned land cannot be expected to provide a reasonable source of livelihood for all the rural population, when as high as 50 per cent of family holdings are less than one acre in size. The proportion of agricultural labourers to total population, therefore, increased from 12.5 per cent in 1931 to 20.16 per cent in 1951.

PART II: PROSPECTS OF EMPLOYMENT

LABOUR FORCE AND UNEMPLOYMENT

11.23 Some indication has already been given of the high degree of unemployment prevailing in the economy of Kerala. Before proceeding to make a quantitative assessment of the extent of unemployment, it is desirable to clarify the definition of

[1] Chapter 9, Industries— Structure and Growth.
[2] Chapter 1 and Chapter 2.

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some of the concepts used. Working force has already been defined as comprising all those persons who take part in gainful economic activity. Labour force, on the other hand, includes all those members of the population who are already engaged in gainful activity and those who are willing to take up work, generally at the current level of wages. The difference between labour force and the working force gives the magnitude of those who are unemployed and are actively seeking work.

11.24 Although these concepts are quite clear, according to definitions, their application in the context of a backward economy like that of Kerala is fraught with difficulties, which are by now quite well known. The seasonal and non-institutionalized nature of economic activity over a wide sphere of the economy creates problems in the way of precise quantification of unemployment. Statistical accuracy of the figures discussed below is naturally subject to these limitations.

11.25 The main source of information on this subject is the survey of unemployment for Travancore-Cochin and Malabar region carried out by the Statistics Department of the State. The survey was carried out in 1954-55 for the Travancore-Cochin region and in 1956-57 for Malabar. In the absence of figures for the same year, the combined results for the two different years are taken, by and large, to be representative of the situation as it existed during 1955-56.

11.26 Table 60 gives the combined results of the two surveys. According to concepts used in the survey, the total population has been divided into eight activity groups given in column 1 of Table 60. Persons falling in category 4, 6, 7, that is, (*i*) those having regular employment (*ii*) casual workers and (*iii*) the people in search of employment, make up the labour force. Category (7) includes the unemployed persons. The under-employed section of the population is covered by category (6), i.e., the casual workers.

11.27 According to this survey, labour force as a proportion of total population comes to 32.5 per cent (all-India : 42.2%[1]). The difference between labour force—population ratio as worked out from this survey and that revealed by the NSS for all-India is primarily due to a difference in the concepts used. The Unemployment Survey of Kerala does not include those below 15 years in the labour force. This assumption is quite justified in the case of a State like Kerala where most of the children go to school. In 1955-56, 14.1 lakh children were registered on the rolls of primary schools. These form about 22 per cent of all the children below 15 years of age. Roughly the same proportion of children below 15 years belong to the labour force in the whole of India (according to the NSS Report). It may, therefore, be concluded that there are only stray cases of children below 15 years belonging to the labour force in Kerala.

11.28 Another way of working out the ratio between the labour force and the total population in the State is to calculate the working force on the basis of Census data and to add to it the number of unemployed persons as obtained from the Unemployment Survey in Kerala. On the basis of the participation rate of 33.5 per cent, working force during 1956 comes out to 50.3 lakh persons[2]. The number of

[1] National Sample Survey : *Report on Employment and Unemployment.*

[2] The manner of working out the working force for 1956 is explained in Appendix I to Chapter 1.

[See p. 311, category 116 -- Analyst]

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actively unemployed persons during 1956 was 6.6 lakhs.[1] The total labour force during 1956 may, therefore, be taken to be 56.9 lakh persons, i.e., 37.9 per cent of the total population.

11.29 One striking feature revealed by this survey is the very high degree of open unemployment. Open unemployment comes out to be as high as 4.2 per cent of the total population, as can be seen from Table 60 (Category 7).[2] Generally it is under-employment rather than open unemployment which is prominent in backward agricultural economies. For example, unemployment in India is only 0.29 per cent of total rural population and 1.99 per cent in urban areas giving a weighted average of 0.58 per cent[3]. The percentage of open unemployment to population in Kerala is, therefore, roughly seven times as high as in the rest of India.

11.30 Category (6) of Table 60, that is, the proportion of casual workers to the total population gives an idea of the magnitude of the problem of under-employment. The incidence of under-employment is also higher in Kerala than in India. Of the total population, 9.6 per cent belongs to this category against about 6 per cent for the whole of India.[4] Among the under-employed section of the population, on an average, a worker was unemployed for about 2.35 days per week. This, however, does not tell the whole story. There are the seasonal variations which extend the period of unemployment to several days at a stretch.

11.31 The above figures do not include disguised unemployment. In rural areas, where family enterprise is the dominant form of organization, there is generally a large surplus of hidden manpower which does take part in economic activity, but whose net contribution towards increasing the output is very little. An objective assessment of the surplus in disguised unemployment is rather difficult. It would have to rely heavily upon notional norms regarding optimum labour requirements among the self-employed sector of rural population. Within the coming decade the problem of primary importance, however, is that of providing jobs for the large back-log of unemployed, who sit completely idle, rather than for those who are in the comparatively favourable position of being employed but below their full capacity.

RURAL-URBAN UNEMPLOYMENT

11.32 The nature of unemployment in rural and urban areas varies considerably. According to NSS Report on 'Employment and Unemployment' (9th Round), open unemployment in rural areas was rather insignificant affecting only 0.29 per cent of the total rural population (urban areas 1.99%). Because of the small size of the sample, the unemployment survey referred to above did not collect separate data for rural and urban unemployment in Kerala. Under these circumstances, only rough

[1] Table 60.

[2] It may be noted that in Table 60 the absolute number of unemployed persons is likely to be high since a portion of Travancore-Cochin, viz., Kanyakumari was transferred to Madras. However, the percentage figures may be assumed to be fairly correct.

[3] *NSS Report on Employment and Unemployment.*

[4] *Ibid.*

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approximations can be made regarding the number of persons unemployed in rural and urban areas.

11.33 There is reason to believe that the high incidence of open unemployment in Kerala is primarily due to high rural unemployment. The two basic reasons for this premise, viz., the very small size of holdings and predominance of perennial crops have already been explained. This conclusion is also corroborated by evidence from some other sources. During 1956 the number of unemployed persons registered with the Employment Exchanges was 38,988 persons.[1] A majority of those registering themselves with the Employment Exchanges generally come from the urban areas. It is believed that roughly 25 per cent[2] of the unemployed persons get themselves registered with the Employment Exchanges in India. In Kerala, the standard of literacy being very high, it may be assumed that a higher proportion (40%) of the unemployed get themselves registered. On this basis the total number of unemployed persons in urban areas would be about 0.95 lakhs. Out of the total unemployed population of 6.6 lakhs, about 5.65 lakhs must, therefore, be residents of rural areas. On the basis of these calculations, rural-urban distribution of the unemployed and the labour force for 1956 is given in the table below:

DISTRIBUTION OF UNEMPLOYMENT IN RURAL AND URBAN AREAS

(In Million)

	Rural	*Urban*	*Total*
1. Population	12.9	2.10	15 0
	(86%)	(14.0%)	(100%)
2. Working Force	4.34	.68	5.02
3. Unemployed	0.565	.095	.66
4. Unemployed as Percentage of Population	0.44	.45	.44
5. Labour Force (2+3)	4.905	.775	5.68
6. Labour Force as Percentage of Population	3.80	3.69	3.786

11.34 It may thus be seen that unlike the rest of India the percentage of unemployed population in rural areas is not markedly less than that in the urban areas. In both areas it works out to about 4.5 per cent.

Educational Standards of the Unemployed

11.35 Analysis of educational attainments of the unemployed population can be helpful in throwing light on the qualitative aspects of the unemployed. The impression one generally gets about Kerala is that unemployment is more severe among the educated persons. The results of the Kerala Unemployment Survey do not exactly bear out this contention. Only 6.8 per cent of those unemployed had been educated upto school leaving (SSLC) standard. The extent of technical education was even lower, only 2.5 per cent of the unemployed having received any form of technical education. It would thus appear that although a fairly large proportion of the unemployed may be literate, not many of them are educated, if SSLC is taken to be the minimum requirement for being defined as an educated person.

[1] *Basic Statistics—Kerala*, published by the State Department of Statistics.

[2] *NSS—Preliminary Report on Urban Unemployment*, Sept. 1953.

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Supply of Labour

11.36 In addition to the current back-log of unemployment, the two sources of future labour supply would be : (*i*) growth of population, (*ii*) changes in labour force population ratio. Of these, by far the most important source will be the growth of population. Long run changes in the labour force population ratio are difficult to predict. For the comparatively short period of next 10 years, this ratio may be assumed to remain constant at about 37.9 per cent or so.

11.37 A look at the population figures in Kerala over the last few decades shows that this State has witnessed a higher rate of growth of population than India as a whole and that during 1941–51 it was higher (22.82%) than in any other State.[1] There are indications to believe that the rate of growth of population during the coming decade may not be so fast. The following table gives the projections for growth of population[2] and the labour force arising out of it during the period 1956–71.

GROWTH OF POPULATION—PROJECTIONS FOR 1956—71

Year	Population (million)	Increase in Population over the previous five years (million)	Increase in the labour force (Labour force population Ratio—37.9 per cent) (million)
1956	15.01	..	..
1961	16.68	1.67	.633
1966	18.34	1.66	.629
1971	20.12	1.78	.674
			1.936
Backlog of unemployment in 1956			.660
			2.596
Less jobs created during the Second Plan			.200[a]
Additional labour supply during 1961–71			2.396

[a] *Employment Trends and Prospects*—Planning Commission. Approximate estimates of employment created during the Second Plan may also be derived from investment figures. On this basis we get a smaller figure for employment generated during the Second Plan period. Public sector investment during the Second Plan was about Rs. 75 crores. Adding 50 per cent for private investment the total comes to Rs. 112.5 crores. Assuming that an investment of roughly Rs. 8,000 is required to create an additional job, the number of jobs created during the Second Plan comes to about 1.4 lakhs.

11.38 The above figures may be taken to be only rough approximations, since the projections of population and labour force ratios are based on certain assumptions. However, the magnitude of the problem is well illustrated by the fact that during the coming decade an additional 23.96 lakh jobs will have to be created if something approaching the standards of full employment has to be achieved. This figure is almost 50 per cent of the existing working force.

[1] *1961 Census*—Provisional Population figures.

[2] Based on NCAER population projections. It may be noted that the NCAER projections would have to be slightly modified in the light of the 1961 Census data. However, the extent of difference would not be so large as to make any substantial difference to our calculations.

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TABLE 4

SECTORAL EMPLOYMENT AND LABOUR PRODUCTIVITY IN KERALA (1955-56)

	Working force			*Net value added per worker (Rs.)*	
	Kerala		*India*	*Kerala*	*India*
	Lakhs	*Per cent*	*Per cent*		
1. Primary Sector	27.6	54.9	71.8	625	411
2. Secondary Sector	9.7 (100%)	19.3	9.4	539	1,294
(a) Factory Enterprises	1.7 (17.5%)	..	..	1,059	2,500
(b) Non-factory Enterprises	7.8 (80.4%)	..	..	413	915
(c) Mining	0.2 (2.1%)	..	..	..	..
3. Tertiary Sector	13.0	25.8	18.8	975.4	1,249
TOTAL	*50.3*	*100.00*	*100.00*	*700.00*	*651.00*

* Recently, the Statistics Department of the Government of Kerala conducted an Integrated Sample Survey. According to this, estimate of total employment in Kerala during 1957-58 was 46.3 lakhs. The difference between these estimates and the one given above are obviously due to difference in the concepts used. The concepts used here are based on classification adopted in the 1951 Census. For the purpose of this report figures based on the Census data are being used. Since Techno-Economic Surveys of other States have also used Census data for calculation of working force, the uniformity provided by this data possesses the advantage that it allows inter-State comparisons. The alternative estimates of employment structure in Kerala, as revealed by the Integrated Sample Survey are given below:

	(In lakhs)
1. Primary Sector	*21.5*
2. Secondary Sector	*9.4*
(a) Mining	0.5
(b) Factory	1.5
(c) Non-factory	7.4
3. Tertiary Sector	*13.4*
TOTAL	*46.3*

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TABLE 58

DENSITY OF POPULATION (KERALA STATE)
(Figures based on 1951 Census)

District		Participation rate (Per cent)	Density of population	
Trivandrum	Travancore-Cochin	36.2	1,369	
Quilon			749	
Alleppey			2,148	
Kottayam			664	
Ernakulam			982	
Trichur			1,188	
Palghat		28.5	795	783
Kozhikode			809	
Cannanore			618	
STATE TOTAL			904	

Palghat, Kozhikode and Cannanore formed the previous districts of Malabar.

TABLE 59

OCCUPATIONAL BREAK-UP OF WORKING FORCE (1951)

	KERALA						INDIA					
	Rural		Urban		Combined		Rural		Urban		Combined	
	Lakhs	Per-centage	Lakhs	Per-centage	Lakhs	Per-centage	Lakhs	Per-centage	Lakhs	Per-centage	Lakhs	Per-centage
Agricultural Sector	22.3	60.3	1.1	18.9	23.4	51.4	990	81.8	30	18.9	1,020	71.8
Non-agricultural Sector	17.3	39.8	4.7	81.1	22.0	48.6	218	18.2	184	81.1	402	28.2
TOTAL	*39.6*	*100.0*	*5.8*	*100.0*	*45.4*	*100.0*	*1,208*	*100.0*	*214*	*100.0*	*1,422*	*100.0*

[Pp 286–309 not Processed]

TABLE 60

UNEMPLOYMENT POSITION IN KERALA

Activity status	*Travancore-Cochin*		*Malabar*		*Kerala*	
I	II		III		IV=II+III	
	Absolute number (In lakhs)	*Percentage to total population*	*Absolute number (In lakhs)*	*Percentage to total population*	*Absolute number (In lakhs)*	*Percentage to total population*
(a) Below 15 years age	41.3	40.7	20.7	36.9	62.0	39.4
(b) Above 15 years	60.2	60.1	35.3	63.0	95.5	60.6
1. Students	4.0	4.0	1.2	2.1	5.2	3.3
2. Disabled or too old	4.6	4.5	3.2	5.7	7.8	4.9
3. Pensioners or Rentiers	1.1	1.4	0.5	0.4	1.2	0.8
4. Having Regular Employment	19.7	19.6	9.8	17.5	29.5	18.7
5. Household Workers	19.2	19.0	10.9	19.4	30.1	19.1
6. Casual Workers	9.1	8.0	7.2	12.1	15.2	9.6
7. People in search of employment	3.7	3.6	2.9	5.9	6.6	4.2
TOTAL POPULATION	*101.6*	*100*	*56.0*	*100*	*157.6*	*100*
LABOUR FORCE (4+6+7)	*31.4*	*30.9*	*19.87*	*35.4*	*51.3*	*32.6*
Category (7) as percentage of labour force	*3.7*	*11.62*	*2.9*	*14.64*	*6.66*	*12.79*

SOURCE: The Statistics Department, Government of Kerala.

TABLE 61

COMPARATIVE SECTORAL DISTRIBUTION OF WORKING FORCE

Sector	*Proportion of working force*	
	1956	*1971*
1. Primary Sector	54.9	42.2
2. Secondary Sector	19.3	24.6
(a) Factory Sector	3.4	9.2
(b) Non-factory Sector and Mining	15.9	15.4
3. Tertiary Sector	25.8	33.2
TOTAL	*100.0*	*100.0*

12:Peter E-5 (1939, 1949)1963 AWll Kerala AWll

as ginger and chillies, palm sugar, mangoes and bananas, betel leaf, tea and coffee. There are two main paddy (unhusked rice) harvests, the *kanni* in September and until November, depending on the type of rice planted and where, and the *magaram* in January and February.

A system of land-tenure and tenancy very special to Kerala is in existence in the state and its principal characteristics may be summed up as follows. Freehold land owners are called *janmis* and they are entitled to the absolute proprietorship of the land; they may mortgage or lease it to anyone as they wish. They are themselves nearly always non-cultivating. The first kind of tenure to which they may resort is called *kanam* and he who holds the lease is known as the *kanamdar*. This is a curious type of arrangement between landlord and tenant, by which the latter deposits a certain sum with the *janmi*, who in return pays interest on the amount as if it were a loan. The *kanamdar* then has the right to work the land or to lease it out to someone else. Every year he pays rent, an adjusted sum as the interest received from the landlord is deducted. Once every twelve years, a so-called renewal fee is paid by the tenant equal to three times the annual rent, and this gives him the right of possession for a further twelve years. Should he wish to give up the lease, the original deposit will be returned to him by the *janmi*. Most *kanamdars* sub-let and do not cultivate the land themselves.

The *kanamdars* often lease out the land as a *kanam* tenure too; but if they do not, it is as a *verumpattam* lease that they do so. This is a simple affair held for one year at a time, by which the tenant pays a fixed rent, or for several years, in which case it is called a customary *verumpattam*, and a renewal fee then becomes necessary, payable between five and twelve years. This lease is used only for paddy fields. Tenants of this category often sub-lease in the same way to others, who cultivate the land either themselves, or, more usually, employ labourers to do so. These labourers are of two kinds, free and tied. The former are coolies hiring themselves out for wages, while the others are agrarian farmhands who receive only board, lodging and clothing from the master responsible for them.

Customary *verumpattam* tenure of palm gardens for the production of coconuts or arecanuts is called *kuzhikanam*. The twelve year renewal fee is equal to the amount made on the garden in the last year and a half of the lease. Virgin and waste land, which nevertheless always has a *janmi* somewhere, is also let out on this type of tenure. The land owner has the right to evict the tenant if he has made no improvement of the land during his period of lease. House-sites occupied by tenants

12:Peter E-5 (1939, 1949) 1963 AWll Kerala AWll

105 also have to be paid for, if they do not wish to be summarily evicted by
425 a land owner who simply tolerates their settling down on his land. This is an ordinary lease, like a *verumpattam*, but is called a *kudiyiruppu*.

Tenants were formerly at a great disadvantage vis a vis the *janmi*, as the latter was at liberty to evict them on the slightest pretext. The Malabar Tenancy Act of 1930, by protecting the tenant, and restricting the cases in which eviction is possible (such as the non-payment of rent for instance, or necessity for the land owner to have some land to cultivate himself), especially of the *kanamdar*, has made this a thing of the past. Dissatisfaction with the existing conditions of land ownership and land-tenure continues, however, and the present tendency goes so far as to want to protect the interests of the *verumpattam* tenants to the detriment of the *kanamdars* and *janmis* and even, in the last resort as we shall see, of the landless, agrarian labourers who constitute the vast army of the Kerala agrarian proletariat.

105 It is difficult to generalize about the distribution of agricultural roles
423 and interests among the various castes and communities in the state.
564 Schematically, it can be said, however, that generally Nambudri Brahmins are *janmis*, since, as mythology has it, Parasu Raman gave them the land in perpetual enjoyment. Commenting on this, one of my interpreters assured me that this was not mere idle belief. It was a fact, giving the Brahmins an unequivocal title to the land, in spite of there being "no legal document" confirming them in their ownership. Many Nayars, including Kshattriyas such as the rajas of Cochin and Travancore, Samantans such as the Zamorin, and some Tiyas and Moplas, are also owners of large tracts of land.

105 *Kanamdars* are usually recruited among the well-to-do Nayars and
564 Tiyas, but also among the big Mopla families. Other Moslems are
425 *verumpattam* tenants, as are the majority of the Tiyas. These of course
423 used to follow their traditional profession of *toddy* (fermented palm
963 juice) tapping, but with the introduction of prohibition in the former
964 Madras State, they have had to give it up, and mainly hire themselves out as labourers. Others who have always hired themselves out in this way, as an immemorial caste occupation, are the Cherumas and Pulayas, some free, but the vast majority tied to the land. Many Moplas, also, have no other means of subsistance.

105 The aborigipals in Kerala continue their wild life of beggars, food-
563 gatherers or primitive forest-clearers and agriculturalists. Some are ad-
963 dicted to witchcraft as are also members of some of the artisan castes,
954 and their activities give Kerala a strange, mysterious atmosphere of imponderable evil, the reputation of which is great outside its boundaries.

12:Peter E-5 (1939, 1949)1963 AWll Kerala AWll
T:495

The informant, Velu, with whom we spoke, kept us outside the house on some chairs in the drive leading up to the property. He did not seem inclined to let us come in. 595* [123]

I made the accompanying genealogy with Velu. It is rather an extensive one since the family was large, and therefore I have laid it out in two Tables (4 & 5), separating the two lots of polyandrous families in which the older generation was divided. As regards the name, the informant told me that the *tarawad* contained five households, of which this was one; they had appellations principally of the four cardinal points, the name of his household meaning "eastern". 595* 601

Velu and his two younger brothers were married polyandrously to Kalyany, who had become their wife after her elder sister, Amalu, had died. This appeared to be somewhat reminiscent of sororate, but I understand that it was not so, the brothers simply having taken their sister-in-law in marriage because they liked her and thought it a good idea. The two elder brothers who were now dead, Pangan and Karapan, had also been married polyandrously to Mogami, who was still alive; she was sixty five at the time of my research work. They had had her all to themselves, because the three younger men had not wanted her. although for what reason it was impossible to make Velu say. All that he would impart to us was that they did not want her, and brought in Amalu as their wife, and kept her in the same house with the others. Even today, he said, they all lived together, without the property having been divided up between them.

Mogami had had eighteen children of whom thirteen were still alive. 595* I had an opportunity to meet this remarkable woman some weeks later, and I found her a lively and intelligent person, who did not appear to be the slightest bit worn out by her two husbands and many children. She was thin and rather small with flashing eyes and a very sharp brain. She told me many anecdotes of her former married life, with great relish and obvious pleasure, as if she had been extremely happy in it. She was quite unashamedly proud of her achievements and her present widowed life was kept interesting by the memories for which she lived.

Two of her eldest daughters, Lakshmi and Kuniyukuti, had been married polyandrously, and still lived under that arrangement, although Chankuni, the elder husband of Kuniyukuti, was rarely at home; he was employed as a peon in Ceylon, and only paid brief visits to Kerala. This brought the total number of polyandrous families in the Keregbetil household to four. [164] [167]

It should be noted, however, that only the men and their families as [591]

[Text continues on p. 183]

12:Peter E-5 (1939, 1949)1963 AWll Kerala AWll
Tiyas
Thandans

to the four eldest boys to begin with. That was twenty seven years ago, and she was forty six now. Innayakkan, the last husband, had joined his brothers later, when he was twelve and with their consent, but there had been no ceremony. 595 * 601

Very soon after this, Iyyer, the third husband, finding conditions too difficult in Kerala, did what many Tiyas had done since time immemorial; he emigrated to Ceylon, where he worked as a railway coolie. Kalyany had remained with Koppan, Pangoda, Ponan and Innayakkan, and she had had five children by them. Then Ponan died of tuberculosis, ten years after the wedding, aged twenty five. Fifteen years ago, the two eldest men had also left for Ceylon and sent Iyyer back to look after their wife. He had returned, had taken up his former profession of toddy tapping, and was her only real husband now. She had had three more children by him, Balakrishnan was the second and the only boy. There had been no news at all of Koppan and Pangoda, and she presumed that they were dead. Inayakkan had run away from home some time back and had never been heard of again; he was also presumed dead. With Iyyer and herself lived Kesheran, her second son, two unmarried girls and the three last children. Work was still scarce, and pay meagre, so that Aiyappan, the eldest, had gone to Kozhikode (Calicut) in order to try and gain employment. His brother, Padmanapan, had done the same, but he had gone to Madras, on the east coast. She had been trying to help Balakrishnan find work all day: yesterday he had been given a job as a coolie, but today, he was unemployed. [464] [167] [464] [166]

Kalyany told me that she was related to the brothers of the Katukulangara *tarawad* whom I had interviewed at Kadavelur on the 27th of October. She was a half sister of Velu by another mother. I found this family particularly interesting, because it illustrated, more than any other Tiya one encountered so far, the ancient and persistant connection which the caste has with Ceylon. Their genealogy is given in Table 8.

Before going on to an account of my visits to Kammalans and other artisan families practising polyandry in Kerala, I would like to give here, together with the material that I collected about Tiyas, the description of a Thandan family that I went to see on the 25th of November 1949. 595*

They lived in a large house, standing in a big garden of coconut trees, arecanut palms, plantains and jacks. It was situated at the cross-roads of the Nilambur valley track and the highway to Pattambi, quite close to Shoranur. [351] [361]

I began by interviewing the matriarch of the household, an old lady of eighty, called Kali, the widow of five husbands. The household and [601]

[Text Continues on P. 191]

12:Peter E-5 (1939, 1949) 1963 AWll Kerala AWll
Kammalans

the cross-roads of the main Shoranur-Palghat highway of the road to Lakkidi, a few furlongs down the latter, on the right hand side. In contrast to the Thandan houses to which we had been, although not to the Tiya (Thiyya) houses of the Cochin labourers, the place looked rather miserable. It was a thatched palm-leaf house, standing on a red laterite loam platform, in the middle of some paddy fields. There were signs about that these Tathans were not only goldsmiths but that they now also practised agriculture. There was paddy lying about to dry in heaps in the yard, and there were stalls for bullocks at the back.

We interviewed a man called Raman and his brother Kochen, aged fifty four and fifty two respectively, who lived polyandrously with their wife, Kurumba, forty five years old. They seemed rather impressed by us, and were reluctant to speak. They observed the outward forms of hospitality, however, and presented us with fresh coconuts for us to drink the milk.

Raman told us that the household's name was Padijarehil, meaning "Western", and that it was part of five others which constituted the Uzhugaparekil *tarawad*. The latter was *makkathayam*, as we expected, and exogamous, as was also their *kiriyam*, although, here too, they only observed the rule in matters which concerned those members of it whom they knew. They had two and a half acres of paddy fields, in simple *verumpattam* lease from a Nambudri Brahmin janmi called Kodiertha-mana. For this they paid five rupees a year and handed in a part of the harvest – five hundred *parahs*, I have in my notes, three hundred from the *kanni* crop and two hundred from the *magaram*.[1] As it was an ordinary *verumpattam*, there was no renewal fee. They had a deficit this year of forty *parahs* (roughly lbs. 866⅛) and they were wondering what they could do to make it good. Last year they had done "other work" (presumably such as hiring themselves out as labourers) in order to raise the cash needed to compensate for the deficiency in grain, and they might do the same thing now. When I asked them what kind of goldsmith's work they did, they laughed and said that they had given this up; how could they carry on with their traditional profession, they asked, when the sovereign which was once worth Rs. 25 had reached Rs. 77?

Raman and Kochen had had eleven children in their polyandrous

[1] This again seems too much. It is equivalent to lbs. 10,830 (1 Palghat *parah* = 10 *edengalis* = 40 *nalis* (1 *nali* = *tolas* 21⅛ in s. Walluvanad and Palghat) = 866,40 *tolas*; as 40 *tolas* = 1 lb. in s. Malabar, 1 *parah* = 866,40 : 40 = 21⅛ lbs and 500 = lbs 10,830).

12:Peter E-5 (1939, 1949)1963 AWll Kerala AWll

"Europeanism" further enhanced its influence in Malabar with the introduction of new industries and capitalistic enterprise. The coconut, cashew nut and coir industries employ thousands today and have created amongst the people an even greater dependence on the fluctuations of world prices than in the days of the pepper trade. Weaving, tile factories (such as the one founded by the Basel Mission), saw-mills, match factories and metal industries have given many people a new outlook on life which they could never have had in the old days, and has profoundly changed their traditional concepts. Prohibition introduced by the Congress Party Government, with its consequent forbidding of the ancient profession of toddy tapping, has thrown many Tiyas out of work, obliging them to seek their livelihood elsewhere, and modifying for this reason the traditional structure of their economy and family life.

Greater and better medical facilities, as well as a growth in industrial productivity, have brought about a correspondingly sharp rise in the population, so much so, indeed, that today Kerala ranks first in density to the square mile out of the whole of India. Agricultural prosperity has unfortunately not kept pace with this advance, making it often difficult for everyone to obtain food, especially when the monsoon fails, as it often does in the latter part of the year. Foodstuffs, especially grain, have thus to be imported from outside, and when this is not sufficient, many seek work in other parts of the world, leaving their families for years at a time, to emigrate and hire themselves out as labourers in Ceylon, Singapore, and the Malay Federation.

It is not surprising, under the circumstances, that the old order in Kerala has crumbled. Of the rajas and maharajas of old, none are any longer in positions of responsibility, those of Cochin and Travancore having also been made destitute by the recent re-arrangement of States in India. The Nambudri Brahmins are, perhaps, those who, because of their priestly character, continue more than anyone else, to lead the ancient, traditional life. Many of them, however, have gone in for the new enterprises, and if they do not always themselves own and direct them, they have invested funds in them. The younger members of the *illams* appear to be increasingly dissatisfied with their lot, and do not seem prepared to accept the old imperatives of occupation and succession. It may not, after all be just a coincidence that the Communist Party Government now in power in Kerala is headed by a Nambudri Brahmin.

The Nayar caste is no doubt the one that has been the hardest hit by the sweeping changes brought about by altered conditions. But its

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[357] and Kshatriya houses and temples, and deal in dairy produce, as well as being engaged in copper-sheet roofing, tile-making, pottery, palanquin-bearing, and so [178] on. But these traditional occupations are fast ceasing 872 under the ferment of a new civilisation. In the matter of education, the Nāyars occupy a prominent position. Almost every Nāyar girl is sent to the village school to learn the three R's, quite as much as a matter of [212] course as the schooling of boys. This constitutes a feature of Malabar life that makes it the most literate country in all India, especially in respect of the female 875 sex. After Rāmanujam Ezhuttachchan developed and enriched the Malayālam language, numerous Asans or village teachers came into existence in different parts of 873 Malabar. After a preliminary study of Malayālam, such as desired higher, *i.e.*, Sanskrit education, got discipled to an Ambalavāsi or a Sastri. Even to-day the estimable desire to study Sanskrit is seen in some Nāyar youths, who have readily availed themselves of the benefit of the local Sanskrit college. In respect of English education, the Nāyars occupy a prominent [658] position. The facility afforded by the Government of Travancore for the study of English is being largely availed of by Nāyars, and it is a matter deserving to be prominently recorded that, in recent years, several Nāyar girls have passed the Matriculation examination of the University of Madras."

212 181 It is noted, in the Gazetteer of Malabar, that "the Nāyars as a class are the best educated and the most advanced of the communities in Malabar (excepting perhaps the Pattar Brāhmans, who are not strictly a Malayālam class), and are intellectually the equals of [464] the Brāhmans of the East Coast. Many of them have risen to the highest posts in Government, and the caste

13:Thurston & Rangachari E-4, 5 (no date) 1909
AW11 Kerala AW11
Nayar

has supplied many of the leading members of the learned professions."

Nāyi (dog).—An exogamous sept of Kuruba.

Nāyinar.—Nāyinar, Nāyanar, or Nainar, has been recorded as a section of Vellālas, who are thought to be descended from Jains who were converted to Hinduism, and as a title of Jains, Kaikōlans, Pallis, and Udaiyāns. Nāyanikulam occurs as a synonym of Bōya. The word Nāyinar is the same as Nāyaka, meaning lord or master, and the Saivite saints, being religious teachers, are so called, *e.g.*, Sundara Mūrti Nāyanar.

Nāyinda.—Recorded, in the Mysōre Census Report, 1901, as the name of a caste, which follows the hereditary occupation of barber, and also of agriculture. "They are," it is there said, "members of the village hierarchy. They are paid, like the Agasa (washerman), in kind for their services. They are also fiddlers, and have the exclusive right of wind instruments. They are known as Kēlasiga or Hajām. They are both Saivites and Vaishnavites. A section of them wear the lingam, and follow Lingayetism. They are known as Silavanta. These people are largely in requisition at feasts, marriages, etc., when they form the music band." Kelasi is the name of a Canarese barber caste, and Hajām is a Hindustani word for barber.

Nedungādi.—This name, denoting a settlement in Nedunganād in the Walluvanād taluk of Malabar, has been returned as a sub-caste of Nāyars and Sāmantas.

Nekkāra.—A small class of washermen in South Canara. The women only are said to do the washing, while the men are employed as devil-dancers.

Nellika (*Phyllanthus Emblica*).—An illam of Tiyan.

Nellu (paddy, unhusked rice).—A gōtra of Kurni.

6:Spate N-4 (no date)1954 AW1 India
Kerala AW11

high and five feet round, on which the paddy is sown just before the rains. When the monsoon bursts the surrounding water is freshened and transplanting takes place. This is a rather precarious method, illustrating the devices enforced by severe population pressure.

(iv) In the wet lowlands above the backwaters more normal methods prevail, but the early onset of the rains enables planting to take place in April–May and harvest in September; the continuance of the rains then often permits a poor second crop (not necessarily paddy) harvested in January; very occasionally a third is possible.

After rice, coconut is the chief crop, accounting for nearly 1 m. ac., typically, of course, in the sandy coastal strip but also on alluvial loams and (with more careful preparation) on laterites. In Travancore the coconut acreage is nearly equal to that of rice; in Quilon taluk, indeed, it covers 85% of cropped area. After rice as the essential food, the coconut palm is the basis of life in Kerala: "Apart from the several uses of the chief products, viz., coir, copra, coconut oil, oil-cake, the hollowed trunk serves as a canoe, the nut forms a staple article of diet, the leaves may be used for many of the purposes of paper, are frequently employed as thatch and for the manufacture of brooms, baskets, umbrellas, tattis [screens kept soaked to cool rooms], and fans, and utilised as crude torches in a dried form, or burnt as fuel, as it is [*sic*] or in the form of charcoal. In addition, the fresh or fermented juice of the stem is consumed as a beverage, by evaporation it is made into jaggery and by subsequent treatment even sugar is obtainable. When distilled, the toddy becomes arrack and finally vinegar."[45] Of the "industrial" workers of Kerala—most of them, of course, cottage workers—about a third are in various processes connected with coconut products, and of these two-thirds are women. The coir 'yarn' is almost entirely cottage-produced, its working-up into mats and so on largely a small factory industry.

The most important other crops (apart from plantation rubber and tea in the hills), are cassava (tapioca) and pepper, mainly in the foothills. The former is grown as a food crop on poorer lateritic soils; pepper is perhaps the chief peasant-produced cash crop after coconut. Cereals other than paddy are negligible, as are oilseeds except for a little sesamum (gingelly), often as a third crop on the higher wet-rice lands. Nearly every homestead has its plantains and other fruit trees, and ginger and the betel vine, with its associated areca palm, are also grown widely but in tiny patches.

Tapioca deserves special mention. Introduced about 1920, it is grown on the lateritic soils ("about as attractive for agriculture as railway ballast") in tiny holdings by the poorest of the poor. As Gourou points out, there is a sort of social inversion: the better-off rice farmers in the valley-bottoms, and a hundred feet or so above them a very wretched (largely Christian) peasantry.

[45] Quoted in Kuriyan, 1937 (Vol. XI), 286. Cf. P. K. Paniker, "The Coconut—its Cultivation on the Malabar Coast", *IGJ* XVIII (1943), 78–88.

in their opinion. There are no other investments so secure, and a little land will feed a man and his family even when he is indisposed to work. Again, a certain amount of prestige is attached to a landed proprietor especially when he is a big one, though there is not such adoration as can sometimes be observed in the attitude of the common people towards the Government officials big and small. 454 [556]

There has been a certain dislocation in the labour market on account of the emigration of certain classes of workers to the rubber and other estates recently established in some parts of the State and elsewhere. Their low wages, their low social position, the baits employed, somewhat nefariously, by the recruiting agents, and the grandiose hopes which the workers entertain of the unseen, have all combined to deplete the village of a certain class of workers from agriculture. The wages not only of agricultural labourers, but of all classes of workers, carpenters, masons, bricklayers, coolies, etc., have gone up. Few of the emigrants have returned, and those who return are certainly not very desirous of going back. 464 167

Manual labour is still looked upon as derogatory, and a well-to-do high caste man labouring upon his own compound or his own fields or allowing either his sons or relatives to do the same would be looked upon with contempt. High caste men have always to employ low caste people for any and every work, agricultural or domestic. Skilled work such as carpentry, blacksmithy, masonry, etc., is invariably performed by the particular "castes", which are hereditary and exclusive in character. These occupy a low position in the Hindu hierarchy of caste, but not so low as that other kind of agricultural labourers whom I called "Cherumas" or Pariahs, who occupy the lowest place of all. Each is respectful to his superiors and somewhat exacting to his inferiors, but there is nothing like hatred or dissatisfaction with one's lot in any of the castes. They take it as Nature-given and the social organism works in a smooth fashion, each man having his own work and his own aspirations. Judging from the present state of affairs it is impossible, and I think undesirable, to unsettle this order of things. There is scope however for the diffusion of education and knowledge, for the opening of a diversity of occupation, for infusing better ideals of social life and joint work, for improving agriculture and removing rural indebtedness and providing means of its non-recurrence in the future. But all this requires enlightened and sympathetic workers. 461